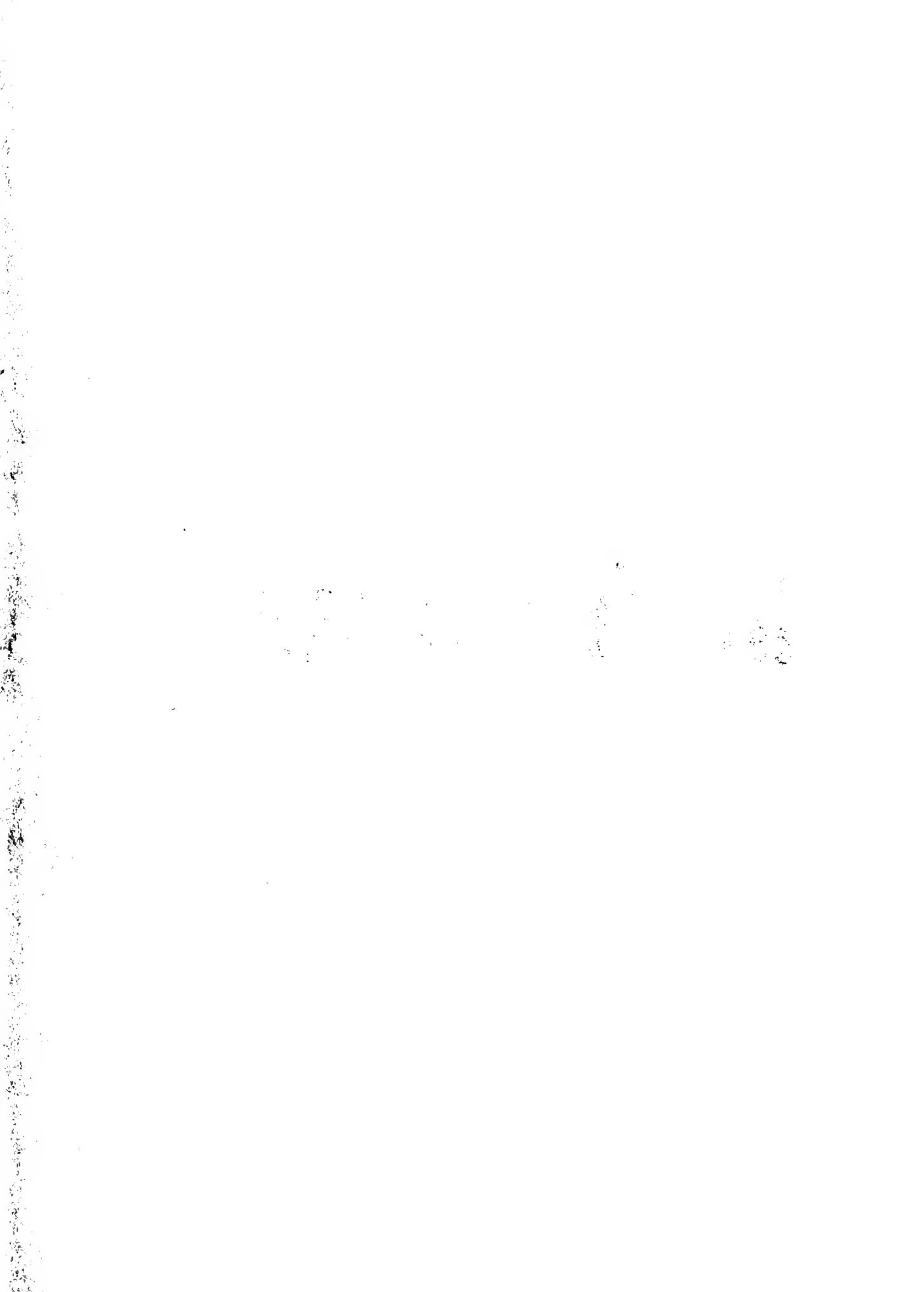


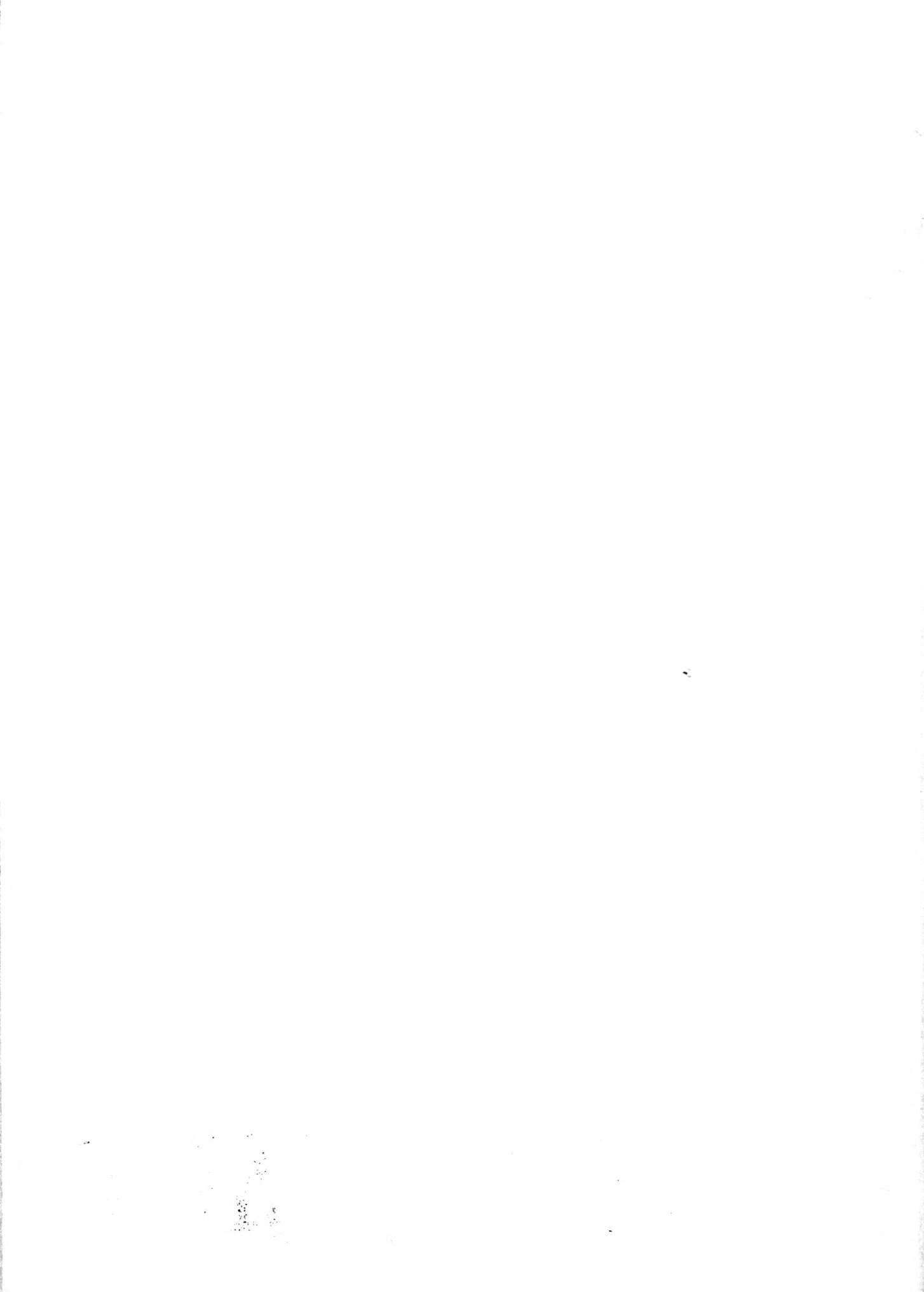


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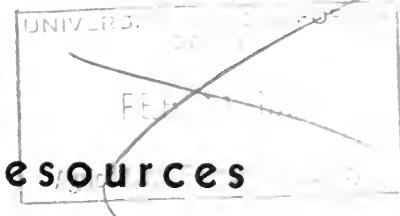




STATE OF CALIFORNIA

The Resources Agency

Department of Water Resources



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BULLETIN No. 130-71

# HYDROLOGIC DATA: 1971

Volume I: NORTH COASTAL AREA

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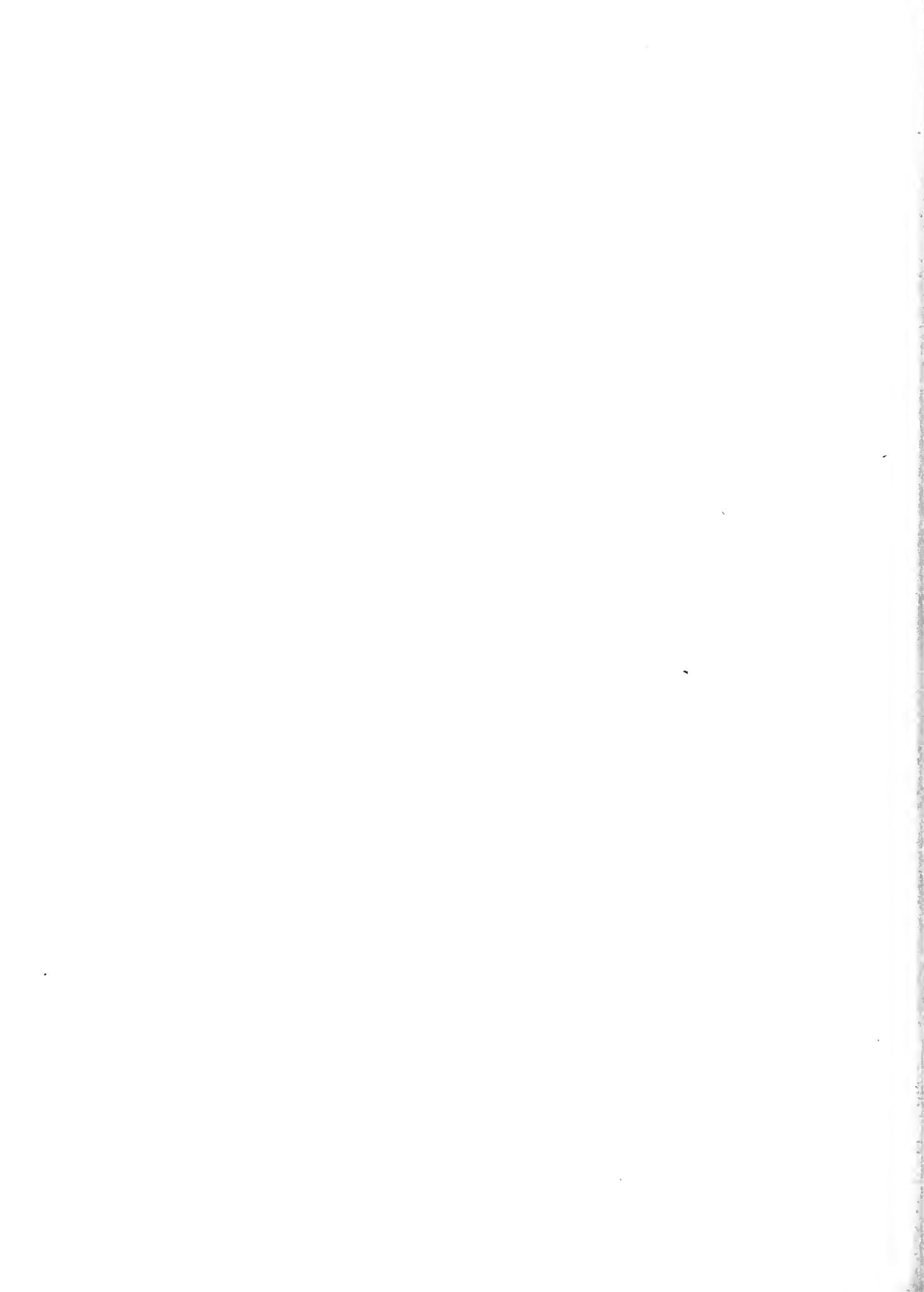
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RONALD REAGAN  
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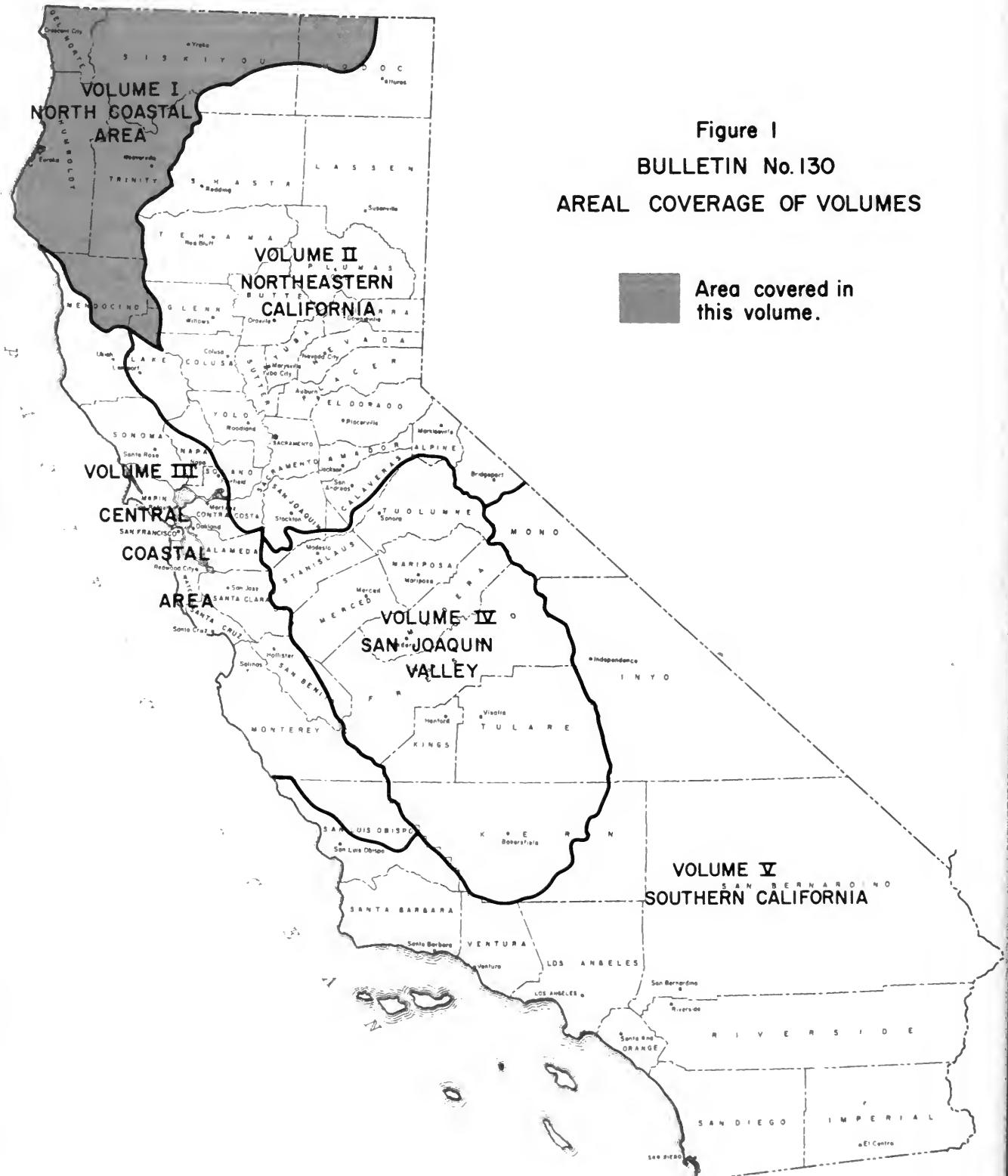


Figure 1  
BULLETIN No. 130  
AREAL COVERAGE OF VOLUMES

### Area covered in this volume.

## FOREWORD

The hydrologic data programs of the Department of Water Resources supplement the data collection activities of other agencies and help satisfy needs of these agencies for data on the quality and quantity of water in the State. Bulletin No. 130-71 presents accurate, comprehensive, and timely hydrologic data which provide a more complete knowledge of the factors affecting our environment and are prerequisites for effective planning, design, construction, and operation of water facilities.

The Bulletin No. 130 series is published annually in five volumes. Each volume presents hydrologic data for one of five reporting areas of the State. These areas are delineated on the map on the opposite page.

*William R. Gianelli*  
William R. Gianelli, Director  
Department of Water Resources  
The Resources Agency  
State of California  
October 18, 1972

METRIC CONVERSION TABLE

<u>ENGLISH UNIT</u>	<u>EQUIVALENT METRIC UNIT</u>
Inch (in.)	2.54      Centimeters
Foot (ft.)	0.3048      Meter
Mile (mi.)	1.609      Kilometers
Acre	0.405      Hectare
Square mile (sq. mi.)	2.590      Square kilometer
U. S. gallon (gal.)	3.785      Liters
Acre-foot (acre-ft.)	1,233.5      Cubic meters
U. S. gallon per minute (gpm)	0.0631      Liter per second
Cubic feet per second (cfs)	1.7      Cubic meters per minute
Part per million (ppm)	Milligram per liter (mg/l)
Part per billion (ppb)	Microgram per liter (ug/l)
Part per trillion (ppt)	Nanogram per liter (ng/l)
Equivalent per million (epm)	Milliequivalent per liter (me/l)
Degrees Fahrenheit ( $^{\circ}\text{F}$ )	Degrees Celsius or Degrees Centigrade ( $^{\circ}\text{C}$ ) = ( $^{\circ}\text{F}$ - 32 $^{\circ}$ ) 5/9

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## ABSTRACT

The report contains tables showing data on surface water flow, ground water levels, and surface and ground water quality in the North Coastal area during the 1970-71 water year. Figures show the location of climatological stations, surface water measurement stations, surface water sampling stations, and ground water basins. Although a map and index of climatological stations are included, precipitation and evaporation data have been dropped from the Bulletin No. 130 series.

## ACKNOWLEDGMENTS

Valuable assistance and contributions were received from several public agencies and many private cooperators. The cooperation of the National Weather Service (formerly the U. S. Weather Bureau) and the U. S. Geological Survey was particularly helpful and is gratefully appreciated.

A special note of thanks is extended to the many loyal and dedicated weather observers whose unselfish efforts have contributed immeasurably to our knowledge of historical weather conditions in the North Coastal area.

State of California  
The Resources Agency  
DEPARTMENT OF WATER RESOURCES

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NORMAN B. LIVERMORE, JR., Secretary for Resources  
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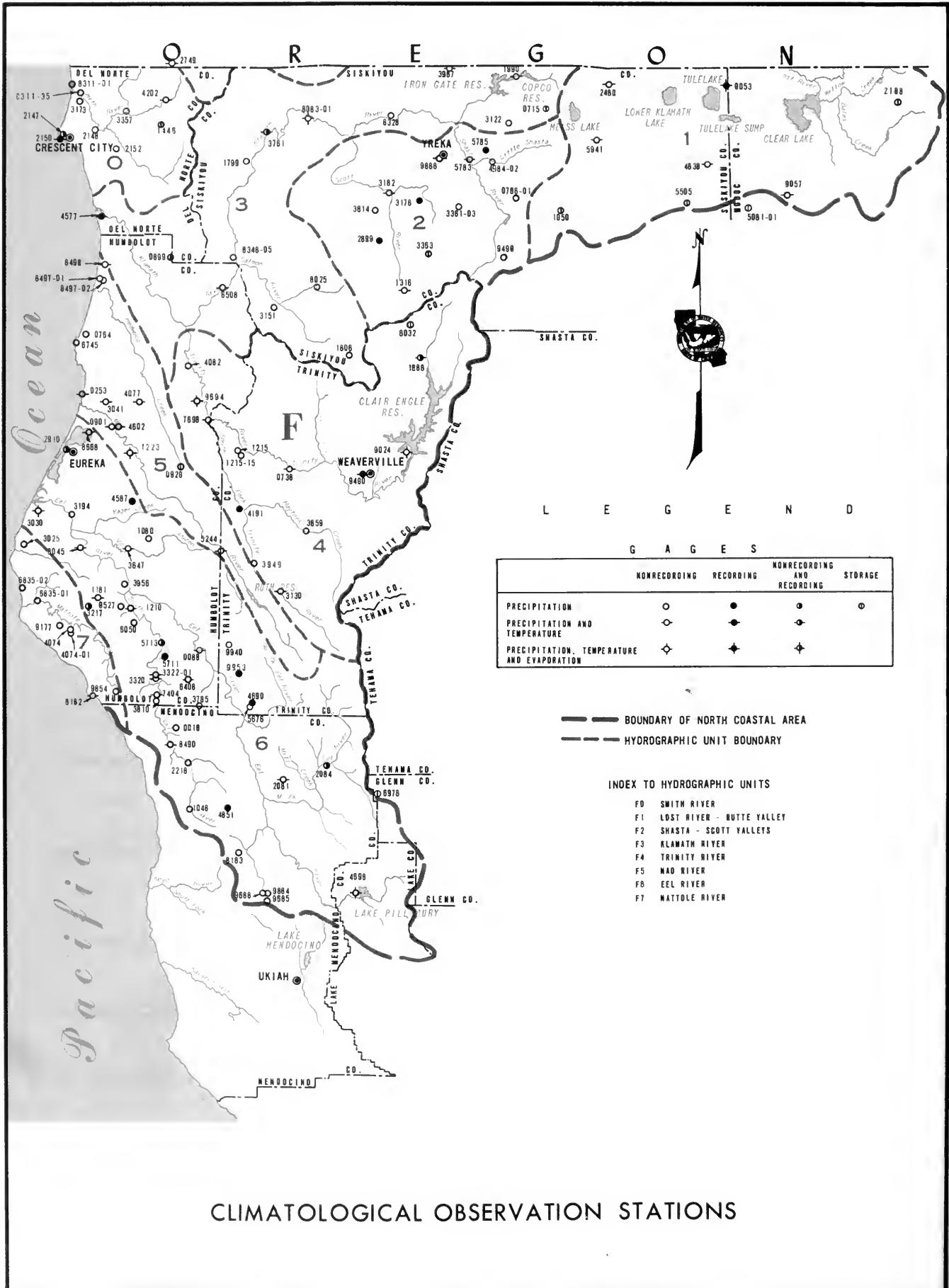
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FIGURE A-1



## APPENDIX A

### CLIMATOLOGICAL DATA

The Department of Water Resources has substantially reduced its collection and publication of climatological data. With the exception of storage gage precipitation data collected in remote mountainous regions, the Bulletin No. 130 series no longer contains climatological data.

However, precipitation data collected by the National Weather Service and local observers and cooperators in the North Coastal area are available in other reports. The National Weather Service publishes a report entitled "Climatological Data for California" and a companion volume, "Hourly Precipitation Data". The Department of Water Resources recently published Bulletin No. 165, "Climatological Stations in California, 1971, Indexed by County", which includes data assembled by observers and cooperators and lists both active and historical precipitation measurement stations.

In addition, evaporation data and daily climatologic data, including temperatures, together with local conditions and qualifying remarks, are available in the files of the Department of Water Resources.

The map and index of climatological stations in the North Coastal area have been retained in this appendix to show the location of the stations and pertinent information concerning them.

TABLE A-1 INDEX OF CLIMATOLOGICAL STATIONS

An explanation of the column headings and code symbols follows:

40-Acre Tract - This denotes the location of the station within the section in which it is located. The letter code is derived from the diagram to the right.

D	C	B	A
E	F	G	H
M	L	K	J
N	P	Q	R

Base and Meridian - The code for this column is as follows:

H - Humboldt Base and Meridian  
 M - Mount Diablo Base and Meridian

Cooperator Number - This number is assigned from the following list:

- 000 Private Cooperators
- 006 Northwestern Pacific Railroad
- 007 California-Oregon Power Company (COPCO)
- 804 California Department of Parks and Recreation
- 808 California Division of Forestry
- 809 California Division of Highways
- 900 National Weather Service (Climatological Data)
- 901 Corps of Engineers, San Francisco District
- 903 Corps of Engineers, Sacramento District
- 905 U. S. Forest Service
- 907 State Climatologist

Cooperator's Index Number - This is the number assigned to the station by the agency responsible for, or handling the records of, the station. The National Weather Service number is only shown in this column when it differs from the alpha order number.

County - This is a standard code for California counties; those counties used in this appendix are shown below:

<u>County</u>	
Del Norte	08
Glenn	11
Humboldt	12
Lake	17
Mendocino	23
Modoc	25
Siskiyou	47
Trinity	53

TABLE A-1  
INDEX OF CLIMATOLOGICAL STATIONS  
NORTH COASTAL AREA

Station		Elevation (in Feet)	Section	Township	Range	40-Acre Tract Block & Meridian	Latitude	Longitude	Cooperator Number	Cooperator's Index Number	Record Began	Record Ended	Years Missing	County Code
Number	Name													
F6 0018	ADANAC LODGE	1100	SEC 14	T23N	R17W	H M 39	50 48 123	42 00 000	000	1950		23		
F6 0068	ALDERPOINT	435	SEC 27	T03S	R05E	H 40	11 00 123	36 00 900	900	1940		12		
F5 0253	ARCATA A P	217	SEC 19	T07N	R01E	Q H 40	58 18 124	05 24 000	000	1957		12		
F3 0715	BESWICK 7 S	6140	SEC 33	T47N	R03W	M 41	52 00 123	14 00 900	900	1952		47		
F4 0738	BIG BAR RANGER STA	1270	SEC 05	T33N	R12W	M 40	54 54 123	14 42 000	900	1943		53		
F5 0764	BIG LAGOON	100	SEC 18	T09N	R01E	R H 41	09 36 124	05 54 000	000	PN2125	1947	12		
F2 0786-01	BIG SPRINGS 4 E	2955	SEC 05	T43N	R04W	R M 41	35 30 122	19 42 000	000	1960		47		
F3 0899	BLUE CREEK MIN LO	4870	SEC 30	T12N	R04E	R H 41	23 42 123	45 54 000	900	1960		68		
F5 0901	BLUE LAKE	105	SEC 30	T06N	R02E	A H 40	52 54 123	59 12 000	000	1951		12		
F4 0929	BOARDCAMP MIN	4500	SEC 26	T04N	R04E	H 40	42 12 123	42 00 000	000	1963		12		
F6 1046	BRANSCOME 2 NW	1480	SEC 09	T21N	R16W	M M 39	41 12 123	39 36 000	900	1959		23		
F1 1050	BRAY 10 WSW	5759	SEC 24	T43N	R03W	M 41	34 00 122	08 00 000	900	1951		47		
F6 1080	BRIDGEVILLE 4 NW	2050	SEC 27	T02N	R03E	H 40	31 00 123	49 00 000	900	1954		12		
F6 1181	BULL CREEK	410	SEC 36	T01S	R01E	H H 40	21 00 124	06 30 000	000	1960		12		
F6 1210	BURLINGTON ST PARK	200	SEC 12	T02S	R02E	D H 40	18 30 123	54 24 000	000	1950		12		
F4 1215	BURNT RANCH 1S	2150	SEC 23	T05N	R06E	E H 40	47 48 123	28 48 000	900	1945		53		
F4 1215-15	BURNT RANCH HMS	1500	SEC 14	T05N	R06E	F H 40	48 30 123	28 30 000	000	1963		53		
F5 1223	BUTLER VALLEY RCH	420	SEC 36	T05N	R02E	H H 40	46 122	54 00 000	900	1970		12		
F2 1316	CALLAHAN RANGER STA	3136	SEC 21	T40N	R08W	M 41	18 00 122	48 00 000	900	1943		47		
FO 1446	CAMP SIX LOOKOUT	3700	SEC 31	T17N	R03E	B M 41	49 48 123	52 24 000	000	1963		08		
F3 1606	CECILVILLE 5 SE	2980	SEC 12	T37N	R11W	M 41	06 00 123	03 00 000	900	1954		47		
F3 1799	CLEAR CREEK	975	SEC 07	T15N	R07E	H H 41	42 30 123	26 54 000	900	1959		47		
F4 1886	COFFEE CREEK RS	2500	SEC 06	T37N	R07W	M 41	05 122	42 00 000	900	1960		53		
F3 1990	COPCO DAM NO 1	2700	SEC 29	T48N	R04W	P M 41	59 00 122	20 00 000	900	1928		47		
F6 2081	COVELO	1385	SEC 12	T22N	R13W	M 39	47 00 123	15 00 000	900	1921		23		
F6 2084	COVELO EEL RIVER RS	1514	SEC 28	T23N	R11W	M 39	50 00 123	05 00 000	900	1940		23		
FO 2147	CRESCENT CITY 1N	40	SEC 20	T16N	R01W	H 41	46 00 124	12 00 000	900	1885		08		
FO 2148	CRESCENT CITY 7 ENE	120	SEC 08	T16N	R01E	H 41	48 00 124	05 00 000	900	1913		08		
FO 2150	CRESCENT CITY HMS	50	SEC 20	T16N	R01W	H 41	46 00 124	12 00 000	900	1941		08		
FO 2152	CRESCENT CITY 11 E	360	SEC 30	T16N	R02E	B H 41	45 18 123	59 30 000	000	1947		08		
F1 2188	CROWDER FLAT	5175	SEC 20	T47N	R11E	K M 41	53 00 120	44 00 000	000	PN2188	1958	25		
F6 2218	CUMMINGS	1270	SEC 21	T23N	R16W	M 39	50 00 123	38 00 000	900	1927		23		
F1 2480	DORRIS INSPECT STA	4240	SEC 36	T48N	R01W	R M 41	57 18 121	54 30 000	000	1959		47		
FO 2749	ELK VALLEY	1711	SEC 34	T19N	R04E	H 42	00 00 123	43 00 000	900	1938		08		
F2 2899	ETNA	2912	SEC 28	T42N	R09W	M 41	28 00 122	54 00 000	900	1935		47		
F6 2910	EUREKA WB CITY	43	SEC 22	T05N	R01W	H 40	48 124	10 20 000	900	1878		12		
F7 3025	FERNDALE 8 SSW	1445	SEC 06	T01N	R02W	P H 40	29 30 124	20 24 000	900	1959		12		
F6 3030	FERNDALE 2NW	10	SEC 34	T03N	R02W	K H 40	35 54 124	16 36 000	900	1963		12		
F5 3041	FIELDBROOK 4 D RCH	285	SEC 36	T07N	R01E	P H 40	56 36 124	01 06 000	000	1956		12		
F3 3122	FOOTHILL SCHOOL	2960	SEC 25	T46N	R05W	F M 41	48 42 122	22 18 000	000	1962		47		
F4 3130	FOREST GLEN	2340	SEC 22	T01S	R08E	H 40	23 00 123	20 00 000	900	1930		53		
F3 3151	FORKS OF SALMON	1270	SEC 24	T10N	R07E	A H 41	15 12 123	19 00 000	900	1959		47		
F0 3173	FORT DICK	46	SEC 14	T11N	R01W	H 41	52 00 124	09 00 000	900	1951		08		
F2 3176	FORT JONES 6 ESE	3324	SEC 12	T43N	R08W	M 41	35 00 122	43 00 000	900	1941		47		
F2 3182	FORT JONES RANGER STA	2720	SEC 02	T43N	R09W	C M 41	36 00 122	51 00 000	900	1936		47		
F6 3194	FORTUNA	60	SEC 35	T03N	R01W	Q H 40	36 00 124	09 00 000	000	1955		12		
F6 3217	FOX CAMP	2500	SEC 09	T02S	R01E	R H 40	18 24 124	03 54 804	804	1960		12		
F6 3320	GARBERVILLE	340	SEC 24	T04S	R03E	H 40	06 00 123	48 00 900	900	1938		12		
F6 3322-01	GARBERVILLE HMS	540	SEC 24	T04S	R03E	G H 40	06 00 123	47 40 809	809	1935		12		
FO 3357	GASQUET RANGER STA	384	SEC 21	T17N	R02E	H 41	52 00 123	58 00 900	900	1940		08		
F2 3361-03	GAZELLE - EPPERSON	2760	SEC 17	T43N	R06W	J M 41	34 18 122	33 12 000	000	1950		47		
F2 3363	GAZELLE LOOKOUT	5200	SEC 08	T41N	R07W	J M 41	24 30 122	40 30 000	000	1956		47		
F2 3614	GREENVIEW	2818	SEC 29	T43N	R09W	M 41	33 00 122	54 00 900	900	1943		47		
F6 3647	GRIZZLY CRK REDWOOD	500	SEC 11	T01N	R02E	H 40	29 00 123	47 00 900	900	1963		12		
F3 3761	HAPPY CAMP RANGER STA	1090	SEC 11	T16N	R07E	H 41	48 00 123	23 00 900	900	1914		47		
F6 3785	HARRIS 7 SSE	1910	SEC 27	T05S	R05E	N H 39	59 24 123	36 42 000	000	1953		23		
F4 3859	HAYFORK RANGER STA	2340	SEC 12	T31N	R12W	R M 40	33 00 123	10 00 900	900	1915		53		
F4 3949	HIDDEN VALLEY RANCH	1978	SEC 32	T01N	R07E	M H 40	24 54 123	24 30 000	000	1959	1967	53		
F6 3956	HIGH ROCK	900	SEC 15	T01S	R02E	K H 40	22 48 123	56 30 808	808	1960		12		
F3 3987	HILTS	2900	SEC 23	T48N	R07W	M 42	00 00 122	38 00 900	900	1939		47		
F7 4074	HONEYDEW 2 WSW	380	SEC 02	T03S	R01W	C H 40	14 18 124	09 00 000	900	1953		12		
F7 4074-01	HONEYDEW HUNTER	380	SEC 02	T03S	R01W	M H 40	14 18 124	09 06 000	000	1955		12		
F5 4077	HONOR CAMP 42	1875	SEC 31	T07N	R03E	K H 40	56 48 123	52 42 000	000	1956		12		
F4 4082	HOOPA	350	SEC 25	T08N	R04E	H 41	03 00 123	40 00 900	900	1941		12		
F4 4191	HYAMPOM	1260	SEC 25	T03N	R06E	H 40	37 00 123	28 00 900	900	1940		53		
F0 4202	IDLEWILD HMS	1250	SEC 06	T17N	R04E	D H 41	54 00 123	46 12 900	900	1946		08		
F3 4577	KLAMATH	25	SEC 15	T13N	R01E	H 41	31 00 123	42 00 900	900	1941		08		
F6 4587	KNERLAND 10 SSE	2356	SEC 13	T03N	R02E	H 40	38 00 123	54 00 900	900	1954		12		
F5 4602	KOREL	150	SEC 28	T06N	R02E	P H 40	52 00 123	57 30 900	900	1937		12		
F6 4690	LAKE MOUNTAIN	2900	SEC 21	T05S	R07E	H 40	01 00 123	24 00 900	900	1939	1969	53		

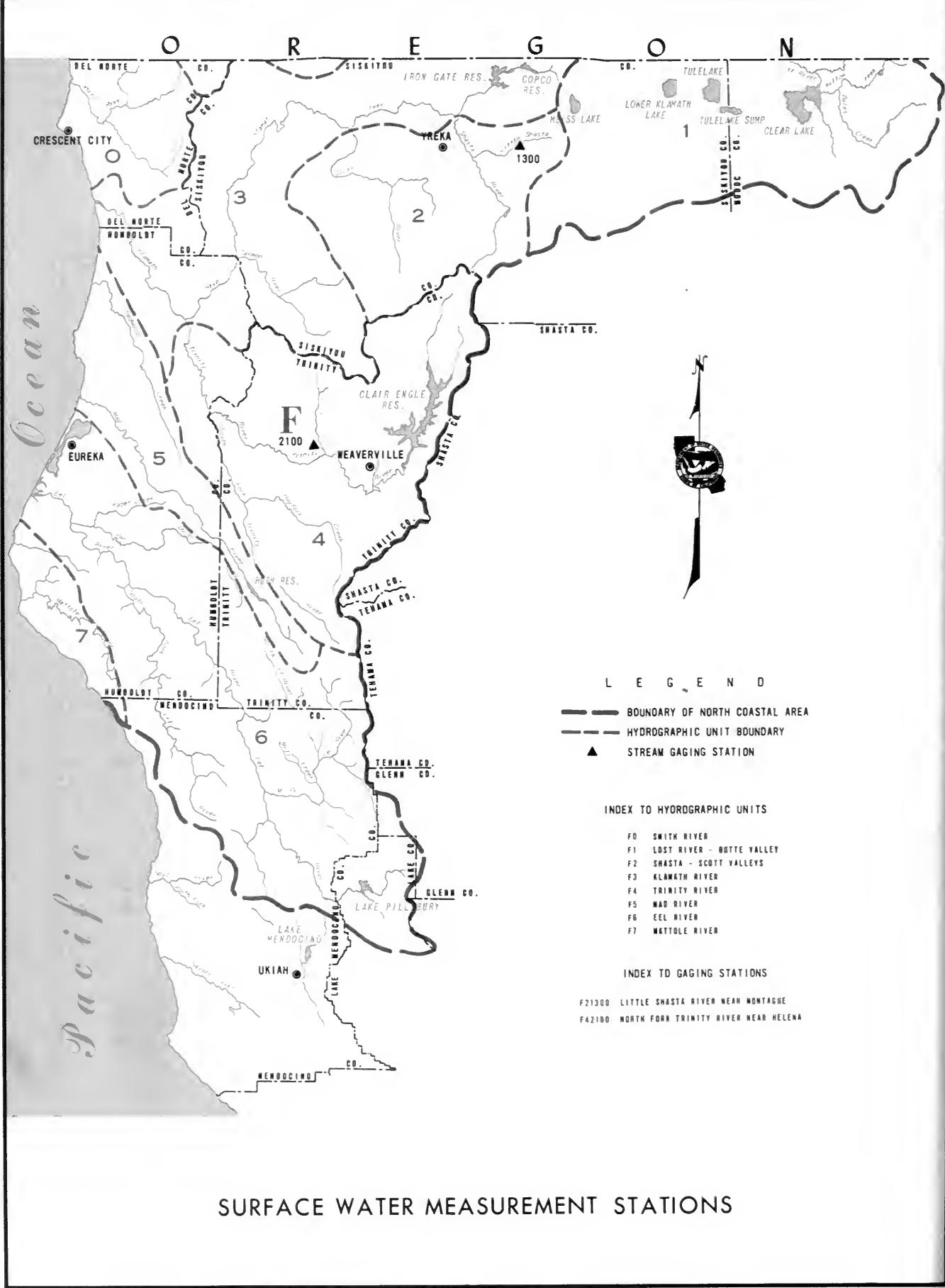
TABLE A-1 (CONTINUED)  
INDEX OF CLIMATOLOGICAL STATIONS  
NORTH COASTAL AREA

Station		Elevation (In Feet)	Section	Township	Range	40-Acre Tract		Base & Meridian	Latitude	Longitude	Cooperator Number	Cooperator's Index Number	Record Began	Record Ended	Years Missing	County Code
Number	Name					0	1									
F6 4698	LAKE PILLSBURY NO 2	1740	SEC 10	T18N	R10W	M 39	25		122 59	00 900			1964	1970	06	17
F1 4838	LAVA BEDS NAT MON	4770	SEC 28	T45N	R04E	H 41	43	48	121 30	30 900			1940		47	
F6 4851	LAYTONVILLE	1640	SEC 01	T21N	R15W	M 39	42	00	123 29	00 900			1940		23	
F2 4984-02	LITTLE SHASTA	2725	SEC 26	T45N	R05W	C 41	43	00	122 23	00 000			1960		47	
F1 5081-01	LONG BELL STATION	4375	SEC 20	T42N	R05E	B 41	28	00	121 25	00 000			1958		25	
F5 5244	MAD RIVER RANGER STA	2775	SEC 17	T01N	R06E	H 40	27	00	123 32	00 900			1943		53	
F1 5505	MEDICINE LAKE	6660	SEC 10	T43N	R03E	M 41	35	00	121 37	00 900			1946		47	
F6 5676	MINA 3 NW	2875	SEC 28	T05S	R07E	A 40	00	06	123 23	30 000			1927		53	
F5 5711	MIRANDA 4 SE	263	SEC 30	T03S	R04E	H 40	11	00	123 47	00 900			1964		12	
F6 5713	MIRANDA SPENGLER RCH	400	SEC 19	T03S	R04E	H 40	12	00	123 46	900			1939		12	
F2 5783	MONTAGUE	2500	SEC 27	T45N	R06W	Q 41	43	42	122 31	36 000	045783		1888	05	47	
F2 5785	MONTAGUE 3 E	2640	SEC 18	T45N	R05W	M 41	45	00	122 28	00 900			1948		47	
F1 5941	MOUNT HEBRON R S	4250	SEC 32	T46N	R01W	M 41	47	00	122 00	00 900			1942		47	
F4 6032	MUMBO BASIN	5700	SEC 35	T39N	R06W	E 41	12	00	122 32	00 900			1946		53	
F6 6050	MYERS FLAT	190	SEC 30	T02S	R03E	H 40	15	40	123 52	00 000			1950		12	
F3 6328	OAK KNOLL RANGER STA	1963	SEC 12	T46N	R09W	M 41	50	00	122 51	00 900			1942		47	
F5 6408	OLD HARRIS	2225	SEC 30	T04S	R05E	G 40	05	00	123 39	42 000			1956		12	
F5 6497-01	ORICK 3 NNE	50	SEC 22	T11N	R01E	K 41	19	24	124 02	30 000			1950		12	
F5 6497-02	ORICK ARCATA REDWOOD	75	SEC 22	T11N	R01E	K 41	19	24	124 02	36 000			1954		12	
F5 6498	ORICK PRAIRIE CREEK	161	SEC 02	T11N	R01E	H 41	22	00	124 01	00 900			1937		12	
F3 6508	ORLEANS	403	SEC 31	T11N	R06E	H 41	18	00	123 32	00 900			1885		12	
F5 6745	PATRICKS PT ST PARK	250	SEC 26	T09N	R01W	L 41	08	12	124 09	00 804			1947		12	
F7 6835-01	PETROLIA	175	SEC 03	T02S	R02W	L 40	19	30	124 16	48 000			1958		12	
F7 6835-02	PETROLIA 4 NW	900	SEC 19	T01S	R02W	D 40	22	24	124 18	30 000			1953		12	
F6 6976	PLASKETT	6580	SEC 27	T22N	R09W	A 39	44	12	122 51	24 000			1960		11	
F6 7404	RICHARDSON GROVE	500	SEC 13	T05S	R03E	H 40	02	00	123 47	900			1961		12	
F3 8025	SAWYERS BAR R S	2169	SEC 20	T40N	R11W	M 41	18	00	123 08	00 900			1931		47	
F6 8045	SCOTIA	139	SEC 07	T01N	R01E	H 40	29	00	124 06	00 900			1926		12	
F3 8083-01	SEIAD VALLEY R S	1371	SEC 11	T46N	R12W	R 41	50	36	123 11	42 905			1953		47	
F7 8162	SHELTER COVE	55	SEC 16	T05S	R01E	H 40	02	124 04	900			1959		12		
F6 8163	SHERWOOD VALLEY	2170	SEC 32	T20N	R14W	F 39	32	36	123 26	30 901			1958		23	
FO 8311-01	SMITH RIVER 2 NW	195	SEC 21	T18N	R01W	A 41	56	30	124 10	42 500			1951	1969	08	
FO 8311-35	SMITH RIVER	55	SEC 26	T18N	R01W	H 41	55	29	124 08	00 000			1970		08	
F3 8346-05	SOMESBAR UKONOM R S	727	SEC 33	T12N	R06E	H 41	23	00	123 28	00 905	PN8919		1965		12	
FO 8490	STANDISH HICKEY PARK	850	SEC 03	T23N	R11W	F 39	52	30	123 43	30 900			1949		23	
F6 8668	SUNNY BRAE	70	SEC 33	T06N	R01E	H 40	52	00	124 04	00 000			1965		12	
F4 9024	TRINITY DAM VISTA PT	2500	SEC 16	T34N	R05W	M 40	48	00	122 46	00 900			1959		53	
F1 9053	TULELAKE	4035	SEC 06	T47N	R05E	M 41	58	00	121 28	00 900			1932		47	
F1 9057	TULELAKE INSP STA	4408	SEC 31	T44N	R07E	F 41	36	121 12	00 000	049057		1953	1969	25		
F7 9177	UPPER MATTOLE	255	SEC 33	T02S	R01W	H 40	15	00	124 11	00 900			1886		12	
F4 9490	WEAVERVILLE RANGER S	2050	SEC 12	T33N	R10W	M 40	44	00	122 56	00 900			1869		53	
F2 9499	WEED FD	3593	SEC 01	T41N	R05W	M 41	26	00	122 23	00 900			1957		47	
F6 9527	WEOTT 2 SE	600	SEC 12	T02S	R02E	H 40	18	29	123 53	40 000			1961		12	
F7 9654	WHITEHORN	1050	SEC 15	T05S	R02E	E 40	01	18	123 56	12 000			1962		12	
F6 9684	WILLITS 1 NE	1350	SEC 17	T18N	R13W	M 39	25	00	123 21	900			1950		23	
F6 9685	WILLITS HOWARD RS	1925	SEC 05	T17N	R13W	M 39	21	00	123 19	00 900			1935		23	
F6 9686	WILLITS NW PAC RR	1365	SEC 18	T18N	R13W	L 39	24	12	123 21	06 006			1911	05	23	
F4 9694	WILLOW CREEK 1 NW	461	SEC 29	T07N	R05E	H 40	57	123 38	900			1968		53		
F2 9866	YREKA	2631	SEC 27	T45N	R07W	M 41	43	00	122 38	00 900			1871		47	
F6 9940	ZENIA 1 SSE	2880	SEC 22	T03S	R06E	G 40	11	18	123 28	54 000			1950		53	
F6 9953	ZENIA-KETTEMPOM STORE	3600	SEC 35	T03S	R06E	H 40	10	123 27	900			1969		53		

TABLE A-2  
STORAGE GAGE PRECIPITATION DATA  
NORTH COASTAL AREA

Station	Measuring Agency	1970-71 Season			
		Measurement Period	Precipitation in Inches		
<b>NORTH COASTAL AREA</b>					
<b><u>SMITH RIVER</u></b>					
Camp Six Lookout	DWR	6-23-70	7-27-71	135.03	
<b><u>LOST RIVER-BUTTE VALLEY</u></b>					
Bray 10 WSW	DWR	6-23-70	7-27-71	26.59	
Crowder Flat	DWR	6-24-70	8-11-71	26.91	
Long Bell Station	DWR	6-25-70	7-29-71	33.63	
Medicine Lake	DWR	6-25-70	7-29-71	52.63	
<b><u>SHASTA-SCOTT VALLEYS</u></b>					
Gazelle Lookout	DWR	6-24-70	7-28-71	24.78	
<b><u>KLAMATH RIVER</u></b>					
Beswick 7S	DWR	6-23-70	7-26-71	60.36	
Blue Creek Mountain	DWR	6-22-70	7-26-71	156.10	
<b><u>TRINITY RIVER</u></b>					
Board Camp Mountain	DWR	6-22-70	7-26-71	136.56	
Mumbo Basin	DWR	6-24-70	7-28-71	69.23	
<b><u>EEL RIVER</u></b>					
Plaskett	DWR	7-07-70	6-13-71	74.83	

DWR - Department of Water Resources



APPENDIX B  
SURFACE WATER MEASUREMENTS

This appendix presents surface water data for the 1971 water year, the period from October 1, 1970 to September 30, 1971. The data consist of daily mean discharges and station locations at two gages, and summary tables of monthly and annual unimpaired runoff from major streams.

In addition to data collected and published by the Department of Water Resources in this appendix, the U. S. Geological Survey collects and publishes data from many additional gaging stations for the same report area. This work is done under a federal-state cooperative contract, or through cooperative arrangements with other local or government agencies. The data published in the following reports together with this report present a comprehensive analysis of the water resources for the area:

1. "Water Resources Data for California  
Part 1. Surface Water Records  
Volume 1: Colorado River Basin, Southern Great  
Basin, and Pacific Slope Basins excluding  
Central Valley"  
United States Department of the Interior  
Geological Survey  
Prepared in cooperation with the California  
Department of Water Resources and with other  
agencies.
2. Bulletin 120, "Water Conditions in California",  
Fall Issue, Department of Water Resources.

Each of the two stations in this appendix has been assigned an identification number. The letter and first digit denote the drainage basin as shown below. The remaining digits further identify each of the stations.

North Coastal Area

F0 - Smith River	F4 - Trinity River
F1 - Lost River-Butte Valley	F5 - Mad River
F2 - Shasta-Scott Valleys	F6 - Eel River
F3 - Klamath River	F7 - Mattole River

TABLE B-1 ANNUAL UNIMPAIRED RUNOFF

Unimpaired runoff is defined as the flow that would occur naturally at a point in a stream if there were: (1) no upstream controls such as dams or reservoirs; (2) no artificial diversions or accretions; and (3) no change in ground water storage resulting from development.

Table B-1

## ANNUAL UNIMPAIRED RUNOFF

In Percent of Average

Water Year	Klamath River, Copco to Orleans	Salmon River at Somesbar	Trinity River at Lewiston	Eel River at Scotia
Average Annual Runoff *	4575	1246	1239	5381
1920-21			145	145
1921-22			63	69
1922-23			55	51
1923-24			21	16
1924-25			121	133
1925-26			65	61
1926-27			147	146
1927-28	83	88	85	86
1928-29	55	48	43	35
1929-30		61	66	65
1930-31	39	38	32	30
1931-32	73	84	58	67
1932-33	78	81	65	68
1933-34	48	47	55	46
1934-35	79	91	78	94
1935-36	87	92	83	107
1936-37	71	79	81	66
1937-38	173	179	170	200
1938-39	56	61	46	50
1939-40	99	102	130	136
1940-41	97	102	206	153
1941-42	101	106	146	138
1942-43	129	139	89	106
1943-44	60	51	53	42
1944-45	80	91	85	89
1945-46	112	122	114	112
1946-47	57	62	59	49
1947-48	93	99	97	88
1948-49	70	77	88	77
1949-50	89	95	69	77
1950-51	138	144	130	133
1951-52	145	157	147	149
1952-53	141	145	130	133
1953-54	134	128	128	129
1954-55	58	47	59	60
1955-56	181	176	164	190
1956-57	94	95	87	81
1957-58	179	181	217	217
1958-59	74	80	84	77
1959-60	75	76	83	87
1960-61	99	97	98	100
1961-62	71	77	84	73
1962-63	128	137	129	132
1963-64	87	90	64	64
1964-65	156	150	139	175
1965-66	103	89	109	96
1966-67	113	101	133	123
1967-68	74	76	82	79
1968-69	131	133	141	161
1969-70	138	128	128	139
1970-71 **	189	199	139	151

\* Average Unimpaired Runoff in Thousands of Acre-Feet Adjusted  
to the 50-Year Period October 1920 Through September 1970.

\*\*Preliminary Data Subject to Revision.



TABLE B-2  
MONTHLY UNIMPAIRED RUNOFF  
In Percent of Average

Month		Klamath River, Copco to Orleans	Salmon River at Somesbar	Trinity River at Lewiston	Eel River at Scotia
October 1970	Percent	75	55	58	36
	Average	89	22	22	55
November 1970	Percent	365	468	316	359
	Average	218	56	47	284
December 1970	Percent	185	180	144	263
	Average	511	130	102	939
January 1971	Percent	268	344	210	168
	Average	678	168	116	1225
February 1971	Percent	112	102	101	22
	Average	635	161	149	1177
March 1971	Percent	223	209	149	185
	Average	604	161	150	796
April 1971	Percent	151	119	94	90
	Average	640	183	218	550
May 1971	Percent	169	157	130	91
	Average	601	195	247	237
June 1971	Percent	175	225	124	101
	Average	346	110	126	79
July 1971	Percent	173	217	133	113
	Average	129	36	37	22
August 1971	Percent	137	164	76	113
	Average	68	15	14	10
September 1971	Percent	104	149	61	122
	Average	56	11	9	7
1970-71 Water Year		189	199	139	151
		8646	2474	1728	8140

Note: The Percent Values are Preliminary Data Subject to Revision.  
Average Unimpaired Runoff in Thousands of Acre-Feet Adjusted to  
the 50-Year Period October 1920 Through September 1970.

TABLE B-3 DAILY MEAN DISCHARGE

The streamflow table is arranged in downstream order for each stream or stream system. Stations on a tributary entering between two main stem stations are listed between those stations, and in downstream order on that tributary. A stream gaging station is named after the stream and the nearest post office (e.g., Little Shasta River near Montague).

The discharges estimated for periods of no record or invalid record are shown with the letter "E". Also qualified by the letter "E" are discharges obtained from extended ratings which exceed 140 percent of the highest measured flow-rate on which the rating curve was based.

The discharge figures in this table have been rounded off as follows:

1. Daily flows - cubic feet per second

0.0	- 9.9	nearest	Tenth
10	- 999	"	Unit
1,000	- 9,999	"	Ten
10,000	- 99,999	"	Hundred
100,000	- 999,999	"	Thousand

2. Monthly means - cubic feet per second

0.0	- 99.9	nearest	Tenth
100	- 9,999	"	Unit
10,000	- 99,999	"	Ten
100,000	- 999,999	"	Hundred

3. Yearly totals - acre-feet

0.0	- 9,999	nearest	Unit
10,000	- 99,999	"	Ten
100,000	- 999,999	"	Hundred
1,000,000	- 9,999,999	"	Thousand

**TABLE B-3**  
**DAILY MEAN DISCHARGE**  
(IN CUBIC FEET PER SECOND)

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY									
													1971	F21300	STATION NAME							
1	4.2	4.4	15	8.9	41	18	58	77	92	27	12	9.2	1									
2	4.2	4.4	15	7.8	39	20	63	80	86	26	12	9.1	2									
3	4.2	4.5	12	6.8	31	20	66	151	78	25	12	8.7	3									
4	4.1	4.6	*	6.2	31	19	71	140	71	24	11	8.7	4									
5	4.0	7.5	20	5.9	45	17	76	113	67	23	11	8.4	5									
6	4.0	6.5	41	5.9	46	18	76	103	64	22	11	8.9	6									
7	4.1	5.5	52	5.9	38	20	71	111	62	21	11	9.1	7									
8	4.2	*	7.8	6.4	33	20	66	134	60	21	*	11	8.7	8								
9	4.3	20	28	*	8.2	31	20	75	125	59	*	11	8.5	*								
10	4.3	8.0	22	17	41	19	79	121	59	21	10	8.5	10									
11	4.2	13	21	15	48	29	69	119	55	20	10	8.3	11									
12	4.1	16	17	13	48	44	66	129	53	19	9.9	8.3	12									
13	4.1	7.9	16	12	46	39	65	130	50	18	9.4	8.1	13									
14	4.1	6.6	14	13	43	33	61	120	47	18	9.4	8.0	14									
15	4.1	5.8	13	14	55	30	63	116	45	17	9.7	7.9	15									
16	4.1	5.7	13	39	43	29	63	105	43	17	9.6	7.8	16									
17	4.1	5.4	13	145	38	26	62	99	42	16	9.6	7.7	17									
18	4.5	5.4	12	179	32	26	63	97	*	43	16	9.5	7.6	18								
19	4.4	5.4	12	130	30	32	61	95	42	16	9.4	7.7	19									
20	4.8	5.0	11	106	27	48	66	90	39	16	9.2	7.6	20									
21	4.8	5.2	10	68	*	25	58	66	*	37	16	9.4	7.7	21								
22	5.1	6.8	9.7	53	25	94	67	86	36	15	9.5	7.6	22									
23	9.1	12	9.7	46	23	*	159	68	85	35	14	9.2	7.5	23								
24	6.0	58	8.9	40	24	124	54	83	33	14	8.9	7.5	24									
25	4.6	68	8.9	36	20	113	49	88	36	14	8.7	7.5	25									
26	4.4	33	8.5	34	21	135	58	97	44	13	8.7	*	26									
27	4.2	17	8.2	35	20	85	68	86	35	13	8.7	8.6	27									
28	4.4	13	8.2	36	17	75	71	94	32	13	8.7	8.7	28									
29	4.4	19	8.1	37	77	74	85	85	30	12	8.5	12	29									
30	4.4	20	8.3	39	72	78	81	81	28	12	9.1	10	30									
31	4.4	9.5	41	59																		
MEAN	4.5	13.4	16.0	39.0	34.3	50.9	66.4	104	50.1	17.8	9.9	8.4	MEAN									
MAX.	9.1	68	52	179	55	159	79	151	92	27	12	12	MAX.									
MIN.	4.0	4.4	8.1	5.9	17	17	49	77	28	12	8.5	7.5	MIN.									
AC. FT.	277	796	984	2400	1906	3130	3953	6369	2981	1097	609	500	AC. FT.									

WATER YEAR SUMMARY

MEAN DISCHARGE	DISCHARGE	MAXIMUM DISCHARGE	DISCHARGE	MINIMUM DISCHARGE
34.5	211	3.05	5 3 1915	2.9 0.96 10 27 1200

TOTAL ACRE FEET
25000

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD			DATUM OF GAGE		
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.D.B.&M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			CFS	GAGE HT.	DATE			FROM	TO		
41 45 11	122 17 58	NW15 45N 4W	5910 E	10.66	12/22/64	20-NOV 51 8 APR 52-APR 55 SEP 56-DATE		1956	1964	0.00	LOCAL

Station located S of Ball Mountain Road, 12 mi. NE of Montague, 16 mi. SW of Macdoel. Stage-discharge relationship affected by ice at times. Drainage area is 48.2 sq. mi.

b - Irrigation season only.



TABLE B-3 (CONT.)  
DAILY MEAN DISCHARGE  
(IN CUBIC FEET PER SECOND)

WATER YEAR		STATION NO.	STATION NAME
DAY	1971	F42100	NORTH FORK TRINITY RIVER NEAR HELENA

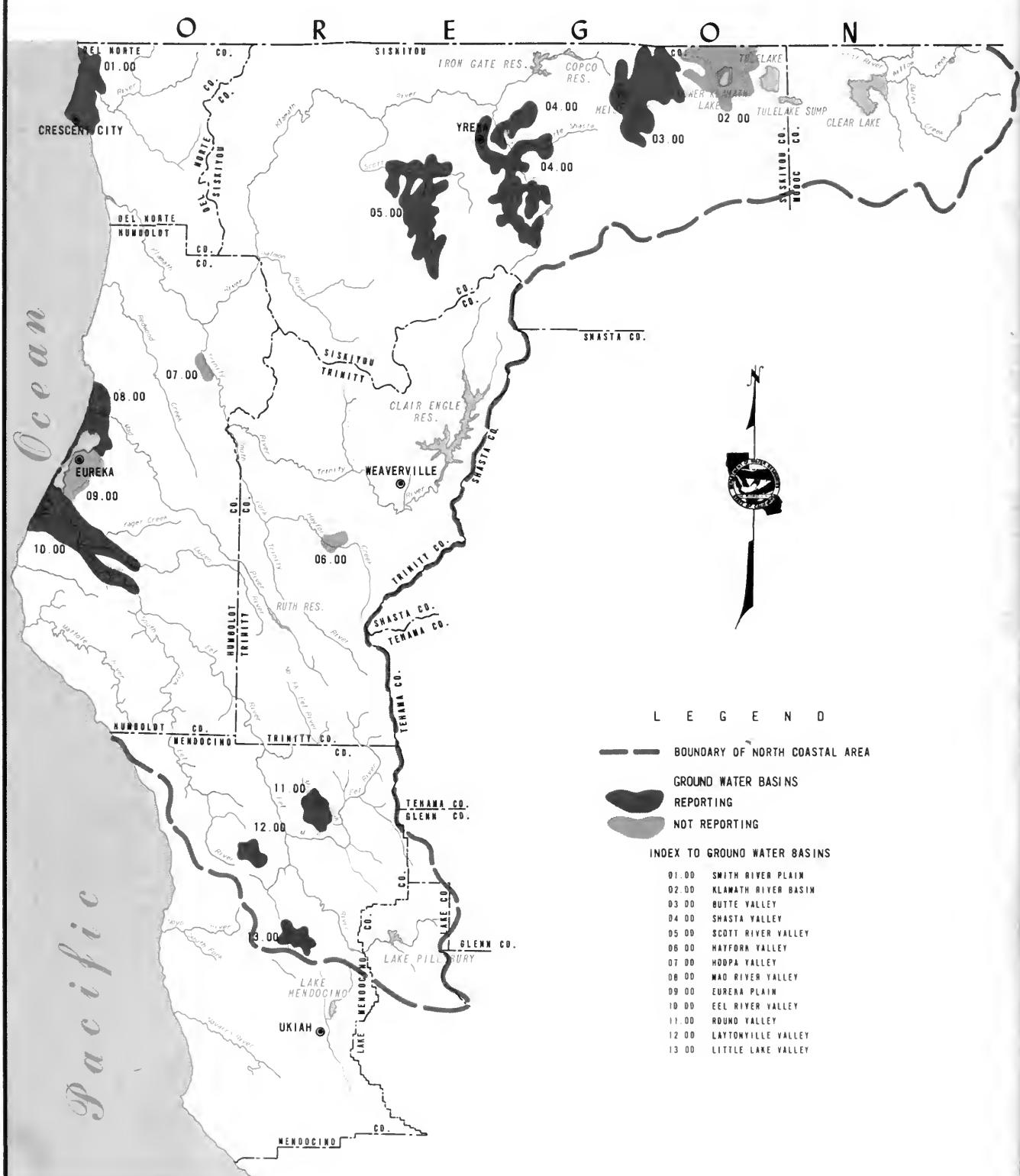
DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	DAY
1	19	23	1340	502	1080	358	958	691	450	309	96	49	1
2	19 *	24	1110	477	1050	343	888	702	430	319	92	51	2
3	19	25	1040	430	948	352	853	785	440	303	88	47	3
4	19	147	800	393	849	358	853	833	460	286	82	43	4
5	19	545	802	362	781	340	890 *	854	487	271	77	40	5
6	19	386	1280	336	771	328	974	782	523	260	73	38	6
7	20	296	3070 *	319	746	324	960	825	546	242	70	38	7
8	20	550	2600	326 *	708	316	886	999	543 *	239 *	66	37	8
9	20	1840	1790	374	673	312	1070	888	521	250	63	36	9
10	20	711 *	1300	737	729	328	1190	884	496	208	60	34	10
11	20	582	1340	877	911	563	960	965	506	187	71	34	11
12	20	711	908	752	1010	1290	851	1060	479	182	84	33	12
13	20	506	828	663	1060	1020	828	976	451	185	72	31	13
14	20	387	745	600	967	826	843	827	456	195	62	29	14
15	20	311	757	837	979	692	859	776	465	208	56	29	15
16	20	259	951	3280	872	718	847	689	503	218	51	28	16
17	20	220	837	8400	754	831	791	612	483	272	48	27	17
18	22	187	720	8690	669	756	709	583 *	450	430	46	27	18
19	24	160	630	4850	598	694	662	607	435	260	44	27	19
20	39	138	590	3080	544	679	653 *	604	452	234	44	27	20
21	40	126	539	2220	502	696	611	558	445	218	44	27	21
22	48	320	483	1680	470	999	588	542	453	203	44	26	22
23	114	2030	447	1360	440 *	3460	567	615	427	182	44	26	23
24	103	5030	418	1150	436	2420	534	720	374	166	42	25	24
25	45	3240	397	998	440	2390	515	733	462	147	40	25	25
26	35	1790	381	909	409	4450	525	654	523	135	38 *	30	26
27	29	1480	367	894	407	2330	562	573	415	128	39	37	27
28	26	1400	390	909	387	1690	617	660	320	120	39	33	28
29	25	1250	406	914		1400	647	688	289	113	39	65	29
30	24	1430	411	963		1240	651	625	290	103	43 *	60	30
31	23		451	1050		1070		511		98	57		31
MEAN	30.0	870	898	1591	721	1083	778	736	453	215	58.5	35.3	MEAN
MAX.	114	5030	3070	8690	1080	4450	1190	1060	546	430	96	65	MAX.
MIN.	19	23	367	319	387	312	515	511	289	98	38	25	MIN.
AC. FT.	1845	51780	55200	97850	40050	66590	46300	45270	26940	13230	3598	2100	AC. FT.

WATER YEAR SUMMARY

MEAN DISCHARGE 623	MAXIMUM DISCHARGE 11500	MAXIMUM GAGE HT. 18.73	MO.	DAY	TIME	MINIMUM DISCHARGE 19	GAGE HT. 5.95	MO.	DAY	TIME	TOTAL ACRE FT. 450800
--------------------------	-------------------------------	------------------------------	-----	-----	------	----------------------------	------------------	-----	-----	------	-----------------------------

LOCATION			MAXIMUM DISCHARGE			PERIOD OF RECORD			DATUM OF GAGE		
LATITUDE	LONGITUDE	1/4 SEC. T. & R. M.D.B.&M.	OF RECORD			DISCHARGE	GAGE HEIGHT ONLY	PERIOD		ZERO ON GAGE	REF. DATUM
			CFS	GAGE HT.	DATE			FROM	TO		
40 46 55	123 07 40	SW21 34N 11W	35800	27.93	12/22/64	JAN 57-DATE	JAN 57-DATE	1957		0.00	LOCAL

Station located 1.0 mi. above mouth, 0.6 mi. N of Helena. Stage-discharge relationship affected by ice at times. Drainage area is 151 sq. mi.



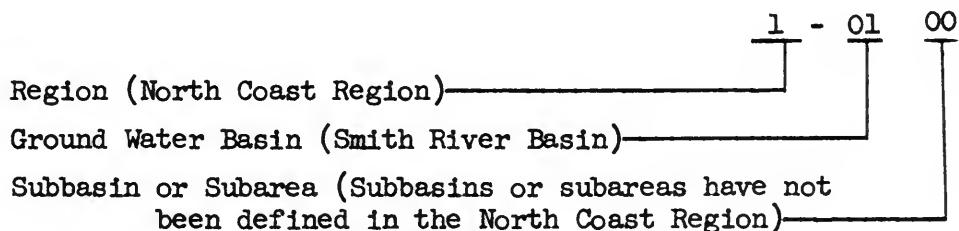
APPENDIX C  
GROUND WATER MEASUREMENTS

This appendix contains ground water level measurements from 44 wells for the period October 1, 1970 through September 30, 1971. It also contains a table which summarizes the measurements. Wells in the network are continuously reviewed and, when conditions dictate, replacement wells are located and measured.

There are nine ground water basins in the North Coastal Region for which data are reported.

Two numbering systems are used by the Department to facilitate the processing of water level measurement data. The two systems are the Region and Basin Designation and the State Well Numbering System as described below.

The regions are those of the California Regional Water Quality Control Boards whose geographic areas are defined in Section 13200 of the Water Code. That portion of Northern California covered by this report is included in the North Coast Region. A decimal system of the form 0-00.00 has been selected according to geographic regions, ground water basins, and subbasins or subareas as follows:



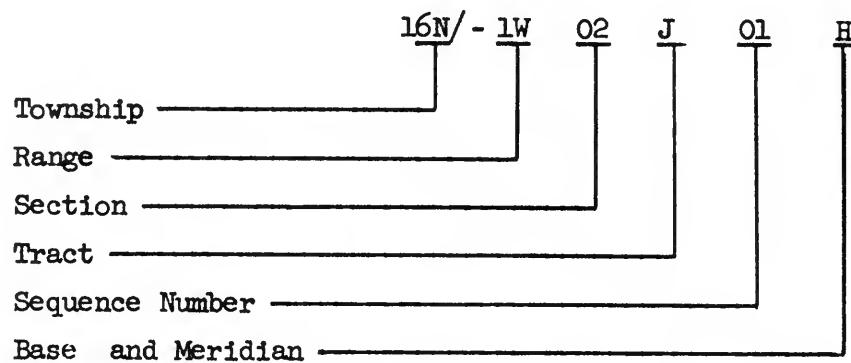
The State Well Numbering System is based on township, range, and section subdivisions of the Public Land Survey.

A section is divided into 40-acre tracts as follows:

D	C	B	A
E	F	G	H
M	L	K	J
N	P	Q	R

Sequence numbers in a tract are generally assigned in chronological order.

The number of a well, assigned in accordance with this system, is referred to as the State Well Number, as illustrated below:



This number identifies and locates the well. In the example, the well is in Township 16 North, Range 1 West, Tract J of Section 2, located in the Humboldt Base and Meridian.

TABLE C-1  
AVERAGE CHANGE OF GROUND WATER LEVELS  
AND SUMMARY OF WELL MEASUREMENTS REPORTED

Ground Water Basin	Name	Number	Average Change Spring 1970 to Spring 1971 in feet	Measuring Agency	Number of Wells Reported Fall 1970 : Spring 1971

NORTH COASTAL REGION

Smith River Plain	1-01.00	+3.2	DWR	6	6
Butte Valley	1-03.00	+0.3	DWR	7	5
Shasta Valley	1-04.00	0.0	DWR	6	6
Scott River Valley	1-05.00	+1.8	DWR	5	5
Mad River Valley	1-08.00	+3.9	DWR	2	2
Eel River Valley	1-10.00	+0.9	DWR	4	4
Round Valley	1-11.00	+1.5	DWR	5	5
Laytonville Valley	1-12.00	+3.6	DWR	4	4
Little Lake Valley	1-13.00	+2.6	DWR	5	5

DWR - Department of Water Resources

TABLE C-2 GROUND WATER LEVELS AT WELLS

An explanation of the column headings and the code symbols follows:

State Well Number - Refer to the explanation presented on page 17.

Ground Surface Elevation - The numbers in this column are the elevation in feet above mean sea level (USGS datum) of the ground surface at the well. Elevations are usually taken from topographic maps and the accuracy is controlled by topographic standards.

Date - The date shown in the column is the date when the depth measurement given in the next column was made.

Ground Surface to Water Surface - This is the measured depth in feet from the ground surface to the water surface in the well; some of the depth measurements in the column may be preceded by a number in parentheses to indicate a questionable measurement. The code applicable to these "questionable measurements" is as follows:

(1) Pumping	(6) Other
(2) Nearby pump operating	(7) Recharge operation at or near well
(3) Casing leaking or wet	(8) Oil in casing
(4) Pumped recently	(9) Caved or deepened
(5) Air or pressure gage measurement	

When a measurement was attempted, but could not be obtained, then only a number in parentheses is shown in the column. The code applicable to these "no measurements" is as follows:

(1) Pumping	(6) Well has been destroyed
(2) Pump house locked	(7) Special
(3) Tape hung up	(8) Casing leaking or wet
(4) Cannot get tape in casing	(9) Temporarily inaccessible
(5) Unable to locate well	(0) Measurements discontinued

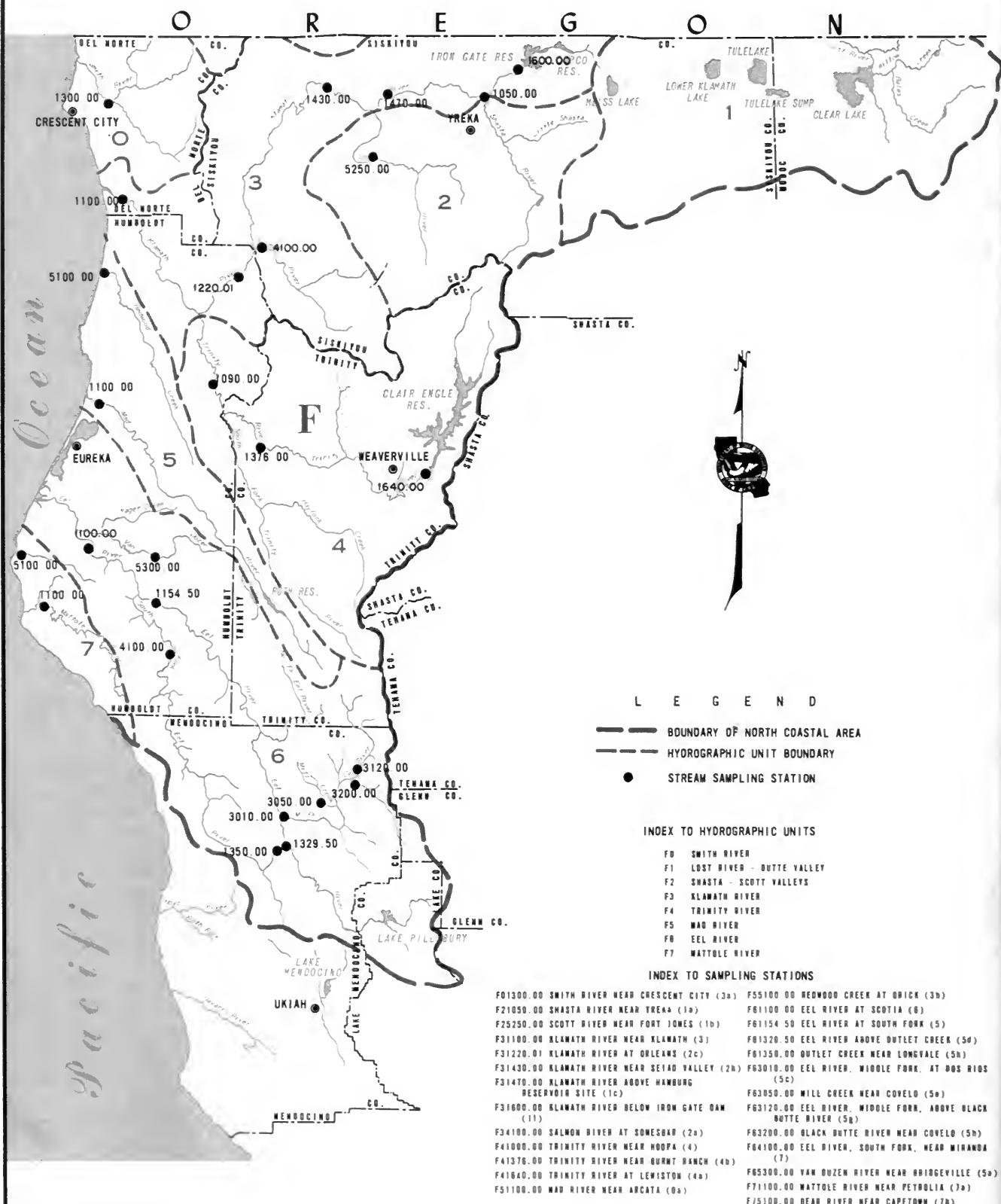
The words FLOW and DRY are shown in this column to indicate a flowing or dry well, respectively. A minus sign preceding the number in this column indicates that the static water level in the well is this distance in feet above the ground surface.

Water Surface Elevation - This is the elevation in feet above mean sea level (USGS datum) of the water surface in the well. It was derived by subtraction of the depth measurement from the ground surface elevation.

Agency Supplying Data - Each of these numbers is the code number for the agency supplying data for that measurement. The Department of Water Resources is the sole agency supplying ground water level measurement data for this report. It has been assigned an agency code number of 5050.

**TABLE C-2**  
**GROUND WATER LEVELS AT WELLS**  
**NORTH COASTAL AREA**

STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA	STATE WELL NUMBER	GROUND SURFACE ELEVATION IN FEET	DATE	GROUND SURFACE TO WATER SURFACE IN FEET	WATER SURFACE ELEVATION IN FEET	AGENCY SUPPLYING DATA					
<b>SMITH RIVER PLAIN 1-01.00</b>																
15N/01W-02J01 H	127.0	10-14-70 4-14-71	26.3 16.5	100.7 110.5	5050 5050	06N/01W-06H01 H	151.0	10-14-70 4-14-71	14.2 1.9	136.8 149.1	5050 5050					
16N/01W-17K01 H	48.0	10-14-70 4-14-71	22.2 10.1	25.8 37.9	5050 5050	06N/01E-29P01 H	25.0	10-14-70 4-14-71	12.0 10.8	13.0 14.2	5050 5050					
17N/01W-02P01 H	31.0	10-14-70 4-14-71	22.5 15.6	8.5 15.4	5050 5050	<b>EEL RIVER VALLEY 1-10.00</b>										
17N/01W-03E01 H	14.0	10-14-70 4-14-71	13.6 9.7	0.4 4.3	5050 5050	02N/01W-08B01 H	34.0	10-14-70 4-13-71	15.8 22.0	18.2 12.0	5050 5050					
17N/01W-15M02 H	21.0	10-14-70 4-14-71	17.0 5.4	4.0 15.6	5050 5050	03N/01W-18D01 H	15.0	10-14-70 4-13-71	5.7 2.3	9.3 12.7	5050 5050					
18N/01W-26P01 H	38.0	10-14-70 4-14-71	21.0 11.3	17.0 26.7	5050 5050	03N/01W-34J01 H	93.0	10-14-70 4-14-71	35.5 30.8	17.5 22.2	5050 5050					
<b>BUTTE VALLEY 1-03.00</b>																
46N/01E-06N01 M	4242.0	10-06-70 4-06-71	24.0 18.5	4218.0 4223.5	5050 5050	03N/02W-36R01 H	12.0	10-14-70 4-13-71	11.5 5.6	0.5 6.4	5050 5050					
46N/02W-25R02 M	4256.0	10-06-70 4-06-71	32.8 25.2	4223.2 4230.8	5050 5050	<b>ROUND VALLEY 1-11.00</b>										
47N/01W-14B01 M	4234.0	10-06-70 4-06-71 4-06-71	9.3 7.8 (0)	4224.7 4226.2	5050 5050	22N/12W-04B01 M	1351.0	10-15-70 4-15-71	16.5 5.4	1334.5 1345.6	5050 5050					
47N/01W-17R01 M	4240.0	10-06-70 10-06-70	9.0 (0)	4231.0	5050	22N/12W-06L03 M	1370.0	10-15-70 4-15-71	5.2 -11.5	1364.8 1381.5	5050 5050					
47N/01W-19L01 M	4238.0	10-06-70 4-06-71	4.9 3.0	4233.1 4235.0	5050 5050	22N/13W-12R01 M	1400.0	10-15-70 4-15-71	30.9 4.8	1369.1 1395.2	5050 5050					
47N/01W-27B01 M	4233.0	10-06-70 4-06-71	8.7 5.6	4224.3 4227.4	5050 5050	23N/13W-36C03 M	1410.0	10-15-70 4-15-71	31.9 8.0	1378.1 1402.0	5050 5050					
48N/01W-26N01 M	4244.0	10-06-70 4-06-71	23.7 15.8	4220.3 4226.2	5050 5050	23N/13W-36Q01 M	1403.0	10-15-70 4-15-71	22.9 -0.1	1380.1 1403.1	5050 5050					
<b>SHASTA VALLEY 1-04.00</b>																
42N/05W-20J01 M	2882.0	10-07-70 4-07-71	3.1 5.1	2878.9 2876.9	5050 5050	21N/14W-30M01 M	1688.0	10-14-70 4-14-71	17.1 3.7	1670.9 1684.3	5050 5050					
42N/06W-10J01 M	2835.0	10-07-70 4-07-71	13.9 5.9	2821.1 2829.1	5050 5050	21N/15W-01L02 M	1682.0	10-14-70 4-14-71	27.5 7.6	1654.5 1674.4	5050 5050					
43N/06W-22A01 M	2665.0	10-07-70 4-07-71	(1) (1)	5050 5050		21N/15W-12M02 M	1630.0	10-14-70 4-14-71	18.8 2.9	1611.2 1627.1	5050 5050					
44N/05W-34H01 M	2637.0	10-06-70 4-06-71	25.2 30.0	2611.8 2607.0	5050 5050	21N/15W-24A01 M	1653.0	10-14-70 4-14-71	13.5 1.9	1639.5 1651.1	5050 5050					
<b>LITTLE LAKE VALLEY 1-13.00</b>																
44N/06W-10F01 M	2537.0	10-06-70 4-06-71	13.1 25.6	2523.6 2511.4	5050 5050	18N/13W-08L01 M	1340.0	10-15-70 4-15-71	9.5 0.7	1330.5 1339.3	5050 5050					
45N/06W-19E01 M	2538.0	10-06-70 4-06-71	21.0 16.0	2517.0 2522.0	5050 5050	18N/13W-17J01 M	1370.0	10-15-70 4-15-71	33.1 21.9	1336.9 1348.1	5050 5050					
<b>SCOTT RIVER VALLEY 1-05.00</b>																
42N/09W-02A02 M	2746.0	10-07-70 4-07-71	11.4 4.8	2734.6 2741.2	5050 5050	18N/13W-18E01 M	1365.0	10-15-70 4-15-71	29.4 24.4	1335.6 1340.6	5050 5050					
42N/09W-27W01 M	2930.0	10-07-70 4-07-71	7.9 1.6	2922.1 2926.4	5050 5050	19N/13W-32L02 M	1350.0	10-15-70 4-15-71	15.9 4.9	1334.1 1345.1	5050 5050					
43N/09W-23F01 M	2728.0	10-07-70 4-07-71	6.1 2.8	2721.9 2725.2	5050 5050	19N/13W-32F01 M	1347.0	10-15-70 4-15-71	15.0 3.8	1332.0 1343.2	5050 5050					
43N/09W-24F01 M	2735.0	10-07-70 4-07-71	8.9 3.0	2726.1 2732.0	5050 5050											
44N/09W-28P01 M	2711.0	10-07-70 4-07-71	21.8 4.5	2689.2 2706.5	5050 5050											

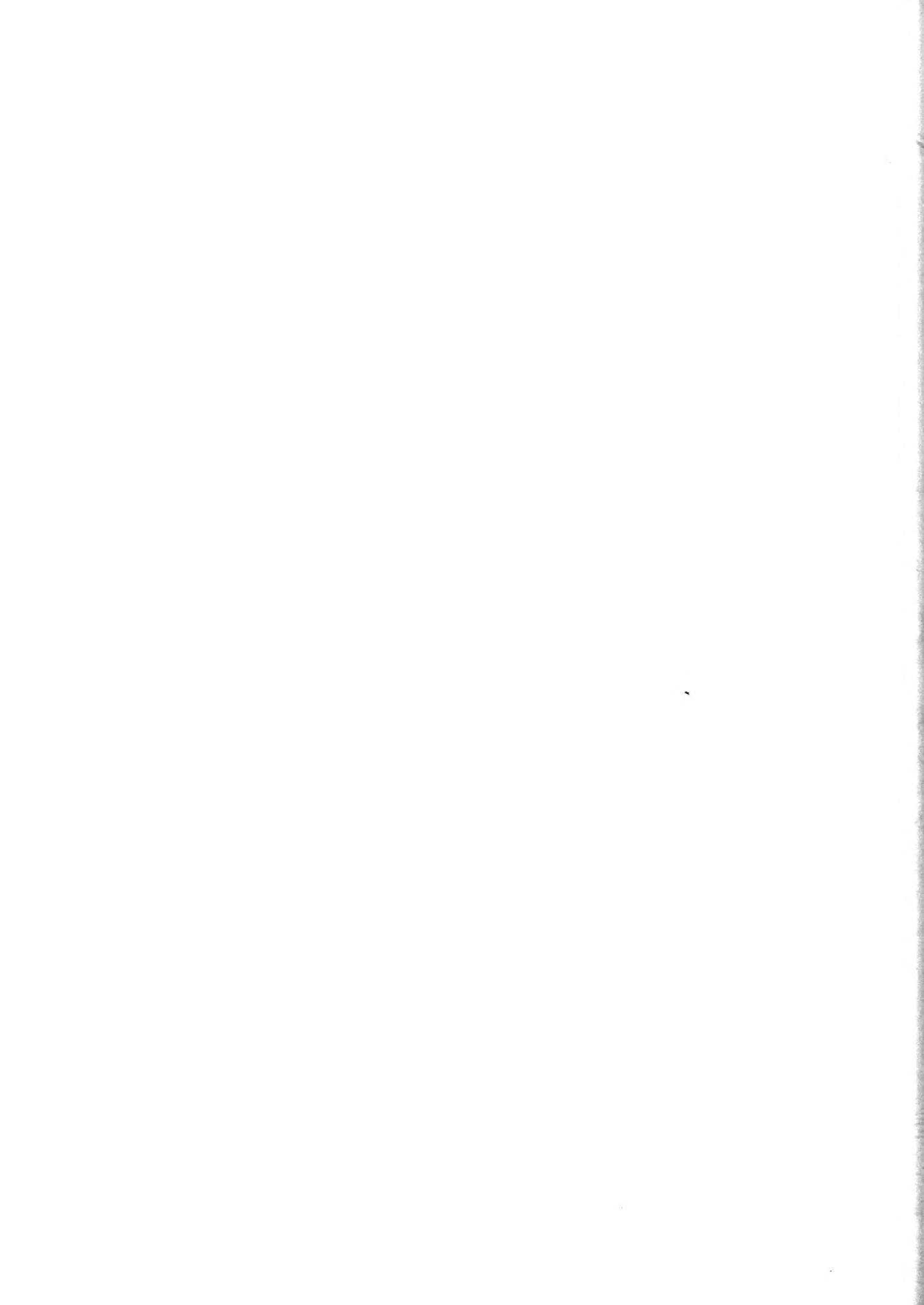


APPENDIX D  
SURFACE WATER QUALITY

This appendix presents surface water quality data collected during the period from October 1, 1970, through September 30, 1971. The data were collected from 26 stream stations in the North Coastal area.

At the time of field sampling, dissolved oxygen, pH, and temperature measurements are made and gage height and time are noted. Comments on local conditions are noted in field books which are available in the files of the Department of Water Resources. The mineral constituents were determined in accordance with methods described in "Standard Methods for the Examination of Water and Waste Water", prepared and published jointly by the American Public Health Association, American Water Works Association, and Water Pollution Control Federation, 13th Edition, 1971. In some cases, the methods used were those presented in the U. S. Geological Survey Water-Supply Paper 1454, "Methods for Collection and Analysis of Water Samples", 1960. The analysis for trace elements is in accordance with the U. S. Geological Survey Water-Supply Paper 1540-B, "Concentration Method for the Spectro-Chemical Determination of Minor Elements in Water".

Each station in this appendix has been assigned a station number. The numbering system is described in Appendix B, "Surface Water Measurements". A sequential number (formerly employed) follows each station name for reference.



**TABLE D-1**  
**SAMPLING STATION DATA AND INDEX**  
**North Coastal Area**

Station	Station Number	Location*	Beginning of Record	Frequency of Sampling	Analyses on Page
Bear River at Capetown (7b)	F75100.00	01N/03W-13 H	MAY 1964	Semiannually	35, 37
Black Butte River near Covelo (5h)	F63200.00	23N/11W-28 M	NOV. 1964	Monthly	34, 37, 43
Eel River above Outlet Creek (5d)	F61329.50	21N/13W-32 M	APR. 1958	Monthly	32, 33, 36, 37, 41
Eel River at Scotia (6)	F61100.00	01N/01E-05 H	APR. 1951	Monthly	31, 32, 36, 37, 41
Eel River at South Fork (5)	F61154.50	01S/02E-26 H	APR. 1951	Monthly	32
Eel River, Middle Fork, at Dos Rios (5c)	F63009.01	21N/13W-06 M	APR. 1958	Monthly	33, 34, 36, 37, 41
Eel River, South Fork, near Miranda (7)	F64100.00	03S/04E-30 H	APR. 1951	Monthly	34, 35, 37, 43
Klamath River above Hamburg Reservoir Site (1c)	F31470.00	46N/10W-14 M	DEC. 1958	Bimonthly	29, 39
Klamath River at Orleans (2c)	F31220.01	11N/06E-31 H	JAN. 1964	Monthly	28, 36, 37
Klamath River below Iron Gate Dam (1f)	F31599.01	47N/05W-20 M	DEC. 1961	Monthly	29, 30, 36, 37, 40
Klamath River near Klamath (3)	F31100.00	13N/02E-19 H	APR. 1951	Monthly	28, 36, 37, 39
Klamath River near Seiad Valley (2b)	F31430.00	46N/12W-03 M	DEC. 1958	Monthly	28, 29, 36, 37, 39
Mad River near Arcata (6a)	F51100.00	06N/01E-15 H	NOV. 1958	Bimonthly	31, 36, 37
Mattole River at Petrolia (7a)	F71100.00	02S/02W-11 H	JAN. 1959	Semiannually	35, 37
Mill Creek near Covelo (5e)	F63050.00	22N/12W-22 M	FEB. 1965	Monthly	34, 43
Outlet Creek near Longvale (5b)	F61350.00	20N/14W-01 M	MAY 1958	Monthly	33, 37
Redwood Creek at Orick (3b)	F55100.00	10N/01E-04 H	NOV. 1958	Monthly	31, 37
Salmon River at Somesbar (2a)	F34100.00	11N/06E-03 H	NOV. 1958	Semiannually	30, 37
Scott River near Fort Jones (1b)	F25250.00	44N/10W-28 M	DEC. 1958	Bimonthly	27, 37
Shasta River near Yreka (1a)	F21050.00	46N/07W-24 M	DEC. 1958	Bimonthly	27, 37
Smith River near Crescent City (3a)	F01300.00	16N/01E-10 H	APR. 1951	Monthly	27, 37
Trinity River at Hoopa (4)	F41080.00	08N/04E-25 H	APR. 1951	Monthly	30, 36, 37, 40
Trinity River at Lewiston (4a)	F41646.00	33N/08W-17 M	APR. 1951	Bimonthly	30, 31, 37, 40
Trinity River near Burnt Ranch (4b)	F41376.00	05N/07E-19 H	APR. 1958	Bimonthly	30, 37, 40
Van Duzen River near Bridgeville (5a)	F65279.00	01N/02E-12 H	APR. 1958	Monthly	35, 37

\* H = Humboldt Base and Meridian  
 M = Mount Diablo Base and Meridian

TABLE D-2 MINERAL ANALYSIS OF SURFACE WATER

Lab and Sampler Agency Codes

5000 - U. S. Geological Survey

5050 - Department of Water Resources

Abbreviations

<u>TIME</u>	- Pacific Standard Time on a 24-hour clock.
<u>G.H.</u>	- Instantaneous gage height in feet above an established datum.
<u>Q</u>	- Instantaneous discharge measured in cubic feet per second (cfs). "E" indicates the value has been estimated.
<u>DEPTH</u>	- Depth at which sample was collected.
<u>DO</u>	- Dissolved oxygen content in milligrams per liter.
<u>SAT</u>	- Percent of normal dissolved oxygen saturation
<u>TEMP</u>	- Water temperature in degrees Fahrenheit (F) and Celsius (C).
<u>PH</u>	- Measure of acidity or alkalinity of water.
<u>EC</u>	- Electrical conductance in micromhos at 25° C.
<u>TDS</u>	- Gravimetric determination of total dissolved solids at 180° C.
<u>SUM</u>	- Total dissolved solids by summation of analyzed constituents.
<u>TH</u>	- Total hardness.
<u>NCH</u>	- Noncarbonate hardness - any excess of total hardness over total alkalinity.
<u>TURB</u>	- Jackson Turbidity Units measured with a Hellege Turbidimeter (J) or a Hach Nephelometer (A).
<u>SAR</u>	- Sodium adsorption ratio.
<u>PERCENT REACTANCE</u>	
<u>VALUE</u>	- Determined by dividing the sum of the cations or anions in milliequivalents per liter into each constituent in milliequivalents per liter arriving at a percentage. For a partial analysis, an approximate value is determined by multiplying the electrical conductance by 0.01 and using that as the cation or anion sum.

Mineral Constituents

B	- Boron	K	- Potassium
CA	- Calcium	MG	- Magnesium
CL	- Chloride	NA	- Sodium
CO <sub>3</sub>	- Carbonate	NO <sub>3</sub>	- Nitrate
F	- Fluoride	SiO <sub>2</sub>	- Silica
HCO <sub>3</sub>	- Bicarbonate	SO <sub>4</sub>	- Sulfate

**TABLE D-2**  
**MINERAL ANALYSIS OF SURFACE WATER**  
**North Coastal Area**

DATE TIME	SAMPLER LAB	G.M. D DEPTH	DO SAT	TEMP °F °C	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN CA MG NA K CO <sub>2</sub> HCO <sub>3</sub> SO <sub>4</sub> CL NO <sub>3</sub>	MILLIGRAMS PER LITER				MILLIGRAMS PER LITER						
							PERCENT REFRACTANCE VALUE	B SIU <sub>2</sub>	F SUM	TDS NCH	TH TURB SAR						
FO 1300.00																	
10/20/70 0715	5050 5050	6.69 365	11.0 101	52.7F 11.5C	7.5 8.1	156	-- -- 7	2.6 .11 7	-- .00 1.18 76	72	-- .10 6	3.6 10	-- --	.00 --	75 1E		
11/09/70 1630	5050 5050	5.19 9500	12.2 113	54.0F 12.2C	7.4 7.7	94	-- --	1.4 .06 6	-- .00 85 90	52	-- .01 1	.4 1	-- --	.00 --	45 110E		
12/08/70 0800	5050 5050	9.17 20600	12.6 110	49.0F 9.4C	7.3 7.8	80	-- --	1.5 .07 9	-- .00 75 94	46	-- .06 8	2.1 06 8	-- --	.00 --	38 160E		
01/05/71 0830	5050 5050	1.90 4280	13.6 106	41.0F 5.0C	7.1 7.9	68	-- --	1.6 .07 8	-- .00 77 87	47	-- .05 6	1.7 05 6	-- --	.10 --	45 30E		
02/02/71 0825	5050 5050	1.77 3460	13.5 110	44 F 7 C	7.3 K.0	89	-- --	1.3 .06 7	-- .00 82 92	50	-- .11 12	3.8 11 12	-- --	.00 --	44 25E		
03/02/71 0745	5050 5050	1.53 3090	13.1 104	42 F 6 C	7.4 7.7	97	-- --	1.5 .07 7	-- .00 89 92	54	-- .07 7	2.5 07 7	-- --	.00 --	48 7E		
04/06/71 0725	5050 5050	2.11 4450	12.7 108	47 F 8 C	7.1 7.7	82	-- --	1.5 .07 9	-- .00 77 94	47	-- .05 6	1.7 05 6	-- --	.00 --	39 30E		
05/04/71 1410	5050 5050	1.16 3390	11.9 105	50 F 10 C	7.3 7.9	83	4.9 .24 27	6.6 .54 61	1.8 .08 9	.6 2	0 00	49 60 93	0 .05 6	.00 .01 1	41 39 40 1 0.1		
06/21/71 1620	5050 5050	8.27 1030	10.5 110	64 F 18 C	7.4 8.3	103	-- --	2.0 .09 9	-- .00 92 89	56	-- .06 6	2.0 06 6	-- --	.00 --	49 0E		
07/20/71 0700	5050 5050	7.19 607	9.8 105	66 F 19 C	7.6 7.6	126	-- --	2.1 .09 7	-- .00 1.18 94	72	-- .07 6	2.4 07 6	-- --	.00 --	60 1E		
08/16/71 1505	5050 5050	6.56 400	10.6 116	68 F 20 C	8.1 8.0	144	-- --	2.4 .10 7	-- .00 1.31 91	80	-- .10 7	3.7 10 7	-- --	.00 --	75 1E		
09/13/71 1545	5050 5050	6.39 330	10.8 118	58 F 20 C	8.1 8.3	148	9.0 .45 27	12 .99 59	5.3 .23 14	.5 1	0 00	83 1.36 87	5.6 3.0 .08 5	.00 00 8 5	70 71 76 4 0.3		
F2 1050.00																	
11/16/70 1100	5050 5050	3.48 230	11.2 97	48.2F 9.0C	8.2 8.3	526	-- --	45 1.96 37	-- .00 4.98 95	304	-- .76 14	.50 --	-- --	207 5E			
01/12/71 1130	5050 5050	3.65 301	12.0 94	41.0F 5.0C	8.2 8.2	482	-- --	32 1.39 29	-- .00 4.57 95	279	-- .54 11	.50 --	-- --	200 5E			
03/15/71 1250	5050 5050	4.85 488	11.5 96	46 F 8 C	8.4 8.4	487	28 1.40 25	32 2.63 47	34 1.44 27	2.7 .07 1	8.0 .27 5	267 4.38 81	11 .23 4	.40 --	277 266 201 31 1.0		
05/10/71 1325	5050 5050	10.5 543	11.0 110	64 F 18 C	8.4 8.3	412	-- --	27 1.17 28	-- .00 4.10 100	250	-- .37 9	13 --	.50 --	-- --	174 10E		
07/06/71 1250	5050 5050	3.06 83	10.0 113	72 F 22 C	8.4 8.3	524	-- --	36 1.57 30	-- .00 5.33 102	325	-- .56 11	.50 --	-- --	234 2E			
09/21/71 1300	5050 5050	3.11 94	10.5 104	59 F 15 C	8.4 8.6	572	31 1.55 26	29 2.38 41	41 1.74 3	5.2 .16 7	13 4.3 82	316 5.18 82	1.3 .03 11	.50 --	358 302 221 84 1.3		
F2 5250.00																	
11/16/70 1515	5050 5050	5.50 358	10.4 90	44.2F 9.0C	7.3 8.3	176	16 .80 41	12 .99 51	3.0 .13 7	.9 .02 1	0 .00 1.69 90	103 1.69 5	4.3 .09 4	3.0 .08 1	1.2 .02 1	.10 --	95 91 90 5 0.1
01/12/71 1600	5050 5050	6.64 664	11.5 96	38 F 3 C	7.2 8.1	194	-- --	2.9 .13 7	-- .00 1.84 95	112	-- .10 5	3.6 10 5	-- --	.10 --	-- --	101 8E	
03/15/71 1515	5050 5050	7.25 1170	11.2 94	46 F 4 C	7.5 8.1	194	-- --	3.0 .13 7	-- .00 1.88 97	115	-- .21 11	7.4 21 11	-- --	.10 --	-- --	98 9E	
05/10/71 1600	5050 5050	11.2 2450	10.4 104	54 F 12 C	7.4 8.1	130	-- --	2.0 .09 7	-- .00 1.11 45	6.8	-- .01 1	.5 01 1	-- --	.00 --	-- --	53 30E	
07/06/71 1545	5050 5050	6.17 510	9.9 104	64 F 20 C	7.5 8.0	174	17 .85 45	11 .12 6	.9 .02 1	0 .00 1.69 92	103 1.69 3	3.0 .05 3	1.7 05 3	1.7 03 2	.00 --	99 89 86 3 0.1	
09/21/71 1600	5050 5050	5.18 92	12.8 134	64 F 14 C	8.2 8.2	294	-- --	5.1 .22 7	-- .00 2.85 97	174	-- .08 3	3.0 08 3	-- --	.00 --	-- --	153 2E	

TABLE D-2 (Continued)  
MINERAL ANALYSIS OF SURFACE WATER  
North Coastal Area

DATE TIME	SAMPLER LAB	G.M. Q DEPTH	DO SAT	TEMP PH EC	FIELD LABORATORY	MINERAL CONSTITUENTS IN CA MG NA K CO <sub>3</sub> HC <sub>CO<sub>3</sub></sub> SO <sub>4</sub> CL NO <sub>3</sub>	MILLIGRAMS PER LITER		MILLIEQUIVALENTS PER LITER		PERCENT REFRACTANCE VALUE		MILLIGRAMS PER LITER							
							8	F	SiO <sub>2</sub>	TDS SUM	TH NCH	TURB SAR								
F3 1100.00 Klamath River Near Klamath																				
10/19/70 1425	5050 5000	3150	10.4 102	55 13	F C	7.9 7.9	20 1.00	9.7 .40 41	13 .57 24	2.1 .05 2	.00 0.00	120 1.97 82	13 .27 11	5.3 .15 6	.1 0.00 28.0	150	90 9	1A 0.6		
11/09/70 1500	5050 5000	12900	8.35 106	11.5 12	F C	7.4 7.5	126	12 .60 48	5.6 .46 37	3.8 .17 13	1.0 .03 2	.00 0.00	56 9.0 77	2.0 1.1 1.16	.06 0.02 2	.00 20.0	82	53 7	170A 0.2	
12/07/70 1545	5050 5000	84900	8.62 104	12.1 9	F C	7.5 7.5	120	12 .60 50	5.2 .43 36	3.6 .16 13	.9 .02 2	.00 0.00	62 7.0 1.02	1.4 .15 12	.04 0.00 3	.00 13.0	74	52 1	60A 0.2	
01/05/71 1010	5050 5000	22700	12.5 95	39.2F 4.0C	F	7.0 7.6	167	15 .75 46	7.7 .63 38	5.3 .23 14	1.0 .03 2	.00 0.00	83 7.0 1.36	1.9 1.0 1.15	.05 0.02 3	.30 17.0	97	69 1	45A 0.3	
02/01/71 1600	5050 5000	31500	3.56 107	12.6 8	F C	7.6 7.8	136	15 .75 50	6.7 .55 36	4.1 .18 12	1.0 .03 2	.00 0.00	75 7.0 1.23	1.4 1.0 1.15	.04 0.01 3	.10 15.0	88	65 4	57A 0.2	
03/01/71 1630	5050 5000	18000	9.16 103	12.7 7	F C	7.5 7.8	154	15 .75 48	6.3 .52 33	6.0 .26 17	1.1 .03 2	-- 1.31 85	80 7.0 1.15	2.0 1.4 1.0	.06 0.01 4	.50 17.0	95	63 1	20A 0.3	
04/06/71 0910	5050 5000	44000	11.4 101	50	F	7.6 7.8	143	16 .80 51	6.6 .54 34	4.8 .21 13	1.0 .03 2	-- 1.29 90	79 7.0 1.25	2.0 1.4 1.15	.06 0.01 4	.06 16.0	93	67 1	60A 0.3	
05/03/71 1455	5050 5000	29400	10.9 99	52.0F 11.1C	F	7.5 7.9	123	13 .65 50	5.7 .47 36	3.7 .16 12	.8 .02 2	-- 1.16 94	71 3.8 1.16	1.6 1.0 1.08	.05 0.00 4	.05 15.0	79	56 1	30A 0.2	
06/22/71 0825	5050 5000	13200	4.21 102	9.9 17	F C	7.4 7.3	112	12 .60 51	5.0 .41 35	3.2 .14 12	.6 .02 2	.00 0.00	66 4.6 1.08	2.2 1.0 1.10	.06 0.00 8	.03 12.0	74	51 4	10A 0.2	
07/20/71 0900	5050 5000	5.81 6000	8.9 101	71.6F 22.0C	F	7.5 8.1	144	16 .80 53	6.1 .50 33	4.3 .19 13	1.2 .03 2	.00 0.00	86 8.8 1.41	2.1 1.8 1.18	.06 0.00 4	.10 13.0	94	65 6	40A 0.2	
08/17/71 0840	5050 5000	4.77 3640	9.0 99	68.9F 20.5C	F	7.8 8.1	186	19 .95 50	6.9 .61 32	1.3 .30 16	.0 .03 2	.00 0.00	109 7.5 1.79	3.0 1.6 1.16	.08 0.00 4	.07 15.0	114	78 12	1A 0.3	
09/13/71 1425	5050 5000	4.74 3680	9.7 108	69.8F 21.0C	F	8.0 7.9	208	19 .95 45	8.8 .72 34	9.3 .40 19	1.9 .05 2	.00 0.00	118 12 1.93	4.9 4.9 1.4	.01 0.00 6	.01 18.0	132	84 13	3A 0.4	
F3 1220.01 Klamath River At Orleans																				
10/19/70 1110	5050 5050	1.65 2110	11.6 110	55.4F 13.0C	F	8.0 7.7	215	-- --	17 .74 34	-- .00	0.0 1.88 87	115	-- 6.6 .19 9	-- 1.0 ~	.10 --	--	88	10E		
11/09/70 1245	5050 5050	1.11 24300	12.1 108	51.0F 10.5C	F	7.5 7.4	118	-- --	4.8 .21 18	-- .00	0.0 1.10 93	67	-- 1.6 .05 4	-- 1.10 93	.00 --	--	49	110E		
12/07/70 1215	5050 5050	6.63 58400	13.0 116	45.0F 7.2C	F	7.3 7.6	125	-- --	4.6 .20 16	-- .00	0.0 1.07 86	65	-- 2.1 .06 5	-- 1.07 86	.00 --	--	53	360E		
01/04/71 1425	5050 5050	7.56 11100	14.1 107	39.2F 4.0C	F	7.4 7.8	176	-- --	7.5 .33 19	-- .00	0.0 1.44 62	88	-- 3.2 .09 5	-- 1.44 62	.10 --	--	78	35E		
02/01/71 1200	5050 5050	0.10 18700	13.6 109	43	F	7.6 7.8	142	-- --	4.9 .21 15	-- .00	0.0 1.26 89	77	-- 1.9 .05 4	-- 1.26 89	.00 --	--	70	70E		
03/01/71 1215	5050 5050	7.72 11600	13.6 108	42	F	7.5 7.8	163	-- --	7.2 .31 19	-- .00	0.0 1.38 85	84	-- 3.3 .09 6	-- 1.38 85	.00 --	--	66	45E		
04/05/71 1235	5050 5050	2.14 24600	12.1 107	50	F	7.6 7.9	147	-- --	6.4 .28 19	-- .00	0.0 1.28 67	78	-- 1.8 .05 3	-- 1.28 67	.10 --	--	61	80E		
05/03/71 1100	5050 5050	1.21 19500	11.7 105	51	F	7.4 7.7	114	10 .50 40	5.8 .48 15	4.2 .18 3	1.2 .03 0	64 1.05 4	2.1 .04 2	.7 .02 1	.5 .01 1	--	53	50 4 0.3		
06/21/71 1050	5050 5050	7.90 8750	11.2 111	59	F	7.4 8.3	98	-- --	3.0 .13 13	-- .00	0.0 .90 92	55	-- .2 .01 1	-- .2 .01 1	.10 --	--	44	6E		
07/19/71 1155	5050 5050	4.93 3820	9.3 104	70	F	7.7 8.0	144	-- --	5.7 .25 17	-- .00	0.0 1.33 92	81	-- 2.6 .07 5	-- 2.6 .07 5	.00 --	--	63	10E		
08/16/71 1115	5050 5050	3.09 2250	9.9 110	70	F	7.9 7.8	188	-- --	8.4 .37 20	-- .00	0.0 1.69 90	103	-- 4.8 .14 7	-- 4.8 .14 7	.20 --	--	79	1E		
09/13/71 1125	5050 5050	2.96 2180	10.0 107	66	F	7.9 8.0	206	18 .90 41	8.0 .66 30	13 .57 26	2.1 .05 2	0 .00 1.77 82	108 12 1.25	4.4 .12 6	.5 .01 6	.10 --	--	112	78 11	1E 0.6
F3 1430.00 Klamath River Near Seiad Valley																				
10/06/70 1245	5050 5050	11.9 1560	57 115	8.4 14	F	8.4 C	248	-- --	19 .83 33	-- .00	0.0 2.05 83	125	-- 7.4 .21 8	-- 1.2 .02 1	.20 --	--	86	2E		
11/16/70 1345	5050 5050	11.2 4040	48.2F 4.0C	7.7 7.7	F	7.9 7.7	267	-- --	24 1.04 39	-- .00	0.0 1.97 74	120	-- 8.0 .23 9	-- 3.5 .06 2	.10 --	--	89	6E		

TABLE D-2 (Continued)  
MINERAL ANALYSIS OF SURFACE WATER  
North Coastal Area

DATE TIME	SAMPLER LAB	G.H. O DEPTH	00 SAT	TEMP FIELD PH	LABORATORY EC	MINERAL CONSTITUENTS IN CA MG NA K CO <sub>3</sub> HCO <sub>3</sub> SO <sub>4</sub> CL NO <sub>3</sub>	MILLIGRAMS PER LITER			MILLIGRAMS PER LITER							
							MILLIEQUIVALENTS PER LITER			PERCENT REACTANCE VALUE							
							B	F	TDS	TH	NCH	TURB SAR					
F3 1430.00 Klamath River Near Seiad Valley																	
CONTINUED																	
01/12/71 1415	5050 5050	12.9 95	37 3	F C	7.3 8.0	230	-- --	15 .65 28	-- .00 1.82 79	-- 1.17 7	3.1 .05 2	.20 --	91 9E				
02/17/71 1215	5050 5050	12.3 99	43 6	F C	7.7 7.9	196	-- --	11 .48 24	-- .00 1.67 85	-- 1.14 7	1.2 .02 1	.10 --	78 12E				
03/15/71 1445	5050 5050	12.4 100	43 6	F C	7.9 8.3	210	-- --	11 .48 23	-- .00 1.79 85	-- 1.12 6	.8 .01	.20 --	86 19E				
04/13/71 1145	5050 5050	10.8 95	50 10	F C	7.6 7.9	172	-- --	8.9 .39 23	-- .00 1.51 88	-- .08 5	.6 .01	.00 --	76 55E				
05/10/71 1450	5050 5050	11.4 108	55 13	F C	7.8 7.9	143	12 .60 41	6.4 .53 36	7.4 .32 22	1.3 .03 2	.0 0.00 9	1.0 .12 2	.7 .01 1	95 72	55 0.4		
06/03/71 1140	5050 5050	11.2 109	58.1F 14.5C	7.8 8.0	171	-- --	10 .44 26	-- .00 1.41 82	.86 82	-- .11 6	3.5 .00	.00 --	64 25E				
07/06/71 1430	5050 5050	10.8 117	67.1F 19.5C	8.1 8.0	185	-- --	8.5 .37 20	-- .00 1.75 95	107 95	-- 1.51 8	.0 .00	.10 --	71 2E				
08/05/71 1120	5050 5050	10.0 113	72 22	F C	8.3 7.9	201	-- --	11 .48 24	-- .00 1.79 89	109 89	-- .16 8	.2 .00	.20 --	75 2E			
09/21/71 1450	5050 5050	11.3 2080	64 119	F C	8.2 7.6	220	15 .75 33	9.4 .77 34	16 .70 31	2.3 .06 3	.0 0.00 86	113 113	7.2 .15 7	1.4 .02 1	.10 --	156 111	76 0.8
F3 1470.00 Klamath River Above Hamburg Reservoir Site																	
11/16/70 1240	5050 5050	10.9 3300	46.4F 8.0C	7.6 7.6	288	-- --	30 1.31 45	-- .00 2.02 70	.123 70	-- 8.4 .24 8	4.0 .06 2	.10 --	86 6E				
01/12/71 1330	5050 5050	13.1 3590	36.0F 2.2C	7.4 8.0	253	-- --	21 .91 36	-- .00 1.85 73	113 73	-- 8.0 .23 9	4.1 .07 3	.20 --	87 13E				
03/15/71 1335	5050 5050	12.6 4680	42 100	F C	8.0 8.6	224	-- --	16 .70 31	-- .17 8	99 72	-- 5.1 .14 6	.9 .01	.20 --	85 15E			
05/10/71 1410	5050 5050	11.3 7440	57 109	F C	7.9 7.7	157	11 .55 34	6.9 .57 36	10 .44 28	1.7 .04 3	.0 0.00 88	79 88	4.9 .10 7	2.0 .02 1	.10 --	94 77	56 20E
07/06/71 1340	5050 5050	10.5 920	70 117	F C	8.1 7.8	204	-- --	12 .52 25	-- .00 1.77 87	108 87	-- 5.6 .16 8	.1 .00	.10 --	75 4E			
09/21/71 1345	5050 5050	11.3 1810	63 116	F C	8.2 7.3	213	14 .70 32	8.5 .70 32	16 .70 32	2.9 .07 3	.0 0.00 85	107 85	8.4 .17 8	1.6 .12 6	.10 --	153 108	70 0.8
F3 1599.01 Klamath River Below Iron Gate Dam																	
10/06/70 1030	5050 5050	9.1 1330	57 88	F C	7.8 7.8	208	-- --	18 .78 37	-- .00 1.64 79	100 79	-- 4.7 .13 6	2.1 .03 1	.20 --	72 3E			
11/16/70 1130	5050 5050	9.8 3070	46.4F 8.0C	7.4 7.6	276	-- --	29 1.26 46	-- .00 1.77 64	108 64	-- 6.7 .19 7	4.2 .07 3	.10 --	77 7E				
12/14/70 1130	5050 5050	12.4 5000	39.2F 4.0C	7.3 7.4	201	-- --	17 .74 37	-- .00 1.44 72	88 72	-- 4.6 .13 6	4.0 .06 3	.10 --	62 20E				
01/12/71 1215	5050 5050	13.0 3290	35.0F 1.7C	7.1 7.8	225	-- --	20 .87 39	-- .00 1.46 65	89 65	-- 4.9 .14 6	4.6 .07 3	.20 --	66 7E				
02/17/71 1030	5050 5050	11.8 3460	41 92	F C	7.5 7.4	195	12 .60 30	6.3 .52 26	18 .78 40	2.6 .07 4	.0 0.00 1.44 67	88 67	29 .60 28	.5 .01 5	.00 --	115 115	56 1.0
03/15/71 1210	5050 5050	12.7 3790	39 96	F C	7.3 8.0	188	-- --	16 .70 37	-- .00 1.33 71	81 71	-- 4.0 .11 6	.6 .01 1	.10 --	62 10E			
04/13/71 1015	5050 5050	10.8 7160	50 95	F C	7.5 7.8	145	-- --	11 .48 33	-- .00 1.18 81	72 81	-- 2.8 .08 6	.5 .01 1	.10 --	45 25E			
05/10/71 1245	5050 5050	12.1 6900	54 112	F C	7.6 7.5	136	-- --	11 .48 35	-- .00 1.02 75	62 50	-- 1.9 .05 4	1.1 .02 1	.10 --	43 10E			
06/03/71 0955	5050 5050	10.6 4880	59 105	F C	7.4 7.6	155	-- --	12 .52 34	-- .00 1.05 70	66 70	-- 3.9 .11 7	.0 .00 0	.00 --	48 10E			
07/06/71 1145	5050 5050	11.7 836	67.1F 19.5C	8.1 7.3	160	-- --	12 .52 33	-- .00 1.26 79	77 79	-- 3.6 .10 6	.3 .00	.10 --	49 4E				
08/05/71 0945	5050 5050	8.7 1000	72 99	F C	8.2 8.3	164	11 .55 34	6.2 .51 31	12 .52 32	2.1 .05 3	.0 0.00 74	93 12	10 .12 7	.20 --	104 88	53 0.7	

TABLE D-2 (Continued)  
MINERAL ANALYSIS OF SURFACE WATER  
North Coastal Area

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP PH	FIELD LABORATORY EC	MINERAL CONSTITUENTS IN CA MG NA K CO <sub>3</sub> HCO <sub>3</sub> SO <sub>4</sub> CL NO <sub>3</sub>	MILLIGRAMS PER LITER			MILLIGRAMS PER LITER								
							MILLIEQUIVALENTS PER LITER			PERCENT REACTANCE VALUE								
CONTINUED			B			F			TDS SUM			TH MCH TURB SAR						
F3 1599.01 Klamath River Below Iron Gate Dam																		
09/21/71 1155	5050 5050	9.8 1720	63 101	7.9 7.3	-- 190	-- --	15 .65 34	-- .00 77	.0 1.46 3	89 1.46 2	-- .06 3	2.2 .03 1	1.7 .03 2	.00 -- --	60 2E			
F3 4100.00 Salmon River at Somesbar																		
10/19/70 1200	5050 5050	4.04 123	11.3 105	53.6F 12.0C	8.0 8.0	22 1.10 64	4.9 .40 23	3.8 .17 10	1.7 .04 2	.0 .00 4	82 .17 11	8.2 .08 5	2.8 .00 8	.00 -- --	104 84 75 0.2			
06/21/71 1150	5050 5050	6.77 3360	11.4 108	55 13	F C	7.2 7.7	54 64	7.2 .36 18	1.2 .10 14	.8 .08 4	.6 .02 4	.0 0.00 8	.2 .01 2	.0 0.00 10	-- 48 27 23 0.2			
F4 1080.00 Trinity River at Hoopa																		
10/19/70 1115	5050 5050	3.85 530	10.0 94	55.0F 12.8C	7.6 8.3	206 206	-- --	4.4 .19 9	-- .00 81	.0 1.67	102 81	-- --	6.6 .19 9	.0 0.00 10	-- -- 102 2E			
11/09/70 1145	5050 5050	1.78 12700	10.4 97	54.0F 12.2C	7.0 7.3	181 181	-- --	2.8 .12 7	-- .00 82	.0 1.48	90 82	-- --	2.6 .07 4	2.0 .03 2	.00 -- --	82 350E		
12/07/70 1110	5050 5050	5.33 23200	10.5 98	48.0F 8.9C	7.5 7.7	136 136	-- --	2.1 .09 7	-- .00 87	.0 1.18	72 87	-- --	2.4 .07 5	.1 .00 10	-- -- 64 420E			
01/04/71 1325	5050 5050	8.75 6100	13.6 103	39.2F 4.0C	7.3 8.0	170 170	-- --	2.6 .11 6	-- .00 88	.0 1.49	91 88	-- --	2.3 .06 4	.1 .00 00	-- -- 84 55E			
02/01/71 1100	5050 5050	0.50 10100	12.3 100	44 7	F C	7.5 8.2	147 147	18 .90 60	5.8 .46 32	2.5 .11 7	.9 .02 1	.0 0.00 1	81 80 6	2.2 .06 4	.1 .00 00	-- 83 74 69 0.1		
03/01/71 1125	5050 5050	7.85 4100	12.8 100	41 5	F C	7.5 7.8	156 156	-- --	2.4 .10 6	-- .00 88	.0 1.38	84 88	-- --	1.5 .04 3	.0 0.00 00	-- 76 45E		
04/05/71 1055	5050 5050	0.02 9920	10.5 93	50 10	F C	7.6 7.9	148 148	-- --	2.6 .11 7	-- .00 95	.0 1.41	86 95	-- --	2.6 .07 5	.1 .00 00	-- 72 70E		
05/03/71 1010	5050 5050	9.03 7260	10.7 97	52 11	F C	7.4 7.5	136 136	-- --	2.4 .10 7	-- .00 88	.0 1.20	73 88	-- --	1.0 .03 2	.1 .00 00	-- 65 70E		
06/21/71 0940	5050 5050	6.41 2590	9.6 99	63 17	F C	7.5 7.7	133 133	-- --	2.6 .11 8	-- .00 90	.0 1.20	73 90	-- --	1.9 .05 4	.0 .00 00	-- 62 8E		
07/19/71 1030	5050 5050	5.53 1660	8.4 94	70 21	F C	7.3 7.5	124 124	-- --	2.6 .11 9	-- .00 87	.0 1.08	66 87	-- --	3.3 .09 7	.2 .00 00	-- 58 190E		
08/16/71 1015	5050 5050	4.24 690	9.9 54	20 7	F C	7.8 8.0	194 194	-- --	3.8 .17 9	-- .00 86	.0 1.67	102 86	-- --	4.0 .11 6	.0 .00 00	-- 92 1E		
09/13/71 1020	5050 5050	4.12 642	9.8 107	64 20	F C	8.0 8.0	202 202	25 1.25	7.7 .63 60	4.4 .19 9	1.3 .03 1	.0 0.00 1	107 82	12 .25 12	4.6 .13 6	.6 .01 00	-- 106 108 94 0.2	
F4 1376.00 Trinity River Near Burnt Ranch																		
11/09/70 1045	5050 5050	11.4 6700	9.9	49.0F 9.4C	7.2 7.4	81 81	-- --	2.0 .09 11	-- .00 79	.0 64	39 79	-- --	2.2 .06 7	1.1 .02 2	.00 -- --	36 160E		
01/04/71 1145	5050 5050	13.0 1900	9.6	37.4F 3.0C	7.4 8.2	173 173	-- --	2.9 .13 8	-- .00 89	.0 1.54	94 89	-- --	4.0 .11 6	.0 .00 00	.10 -- --	97 2E		
03/01/71 1015	5050 5050	13.1 1350	10.1 101	40 4	F C	7.5 7.9	152 152	-- --	2.8 .12 8	-- .00 91	.0 1.38	84 91	-- --	1.5 .04 3	.0 .00 00	-- 72 2E		
05/03/71 0850	5050 5050	11.0 2830	9.7	50 10	F C	7.4 7.9	117 117	13 .65 52	5.7 .47 38	2.5 .11 9	.6 .02 2	.0 0.00 1	64 94	1.3 .03 3	1.3 .04 4	.1 .00 00	-- 56 56 55 0.1	
07/19/71 0910	5050 5050	9.3 885	10.2 102	68 20	F C	7.3 7.4	90 90	-- --	2.4 .10 11	-- .00 91	.0 .82	50 91	-- --	2.8 .08 9	.1 .00 00	-- 40 25E		
09/13/71 0920	5050 5050	9.5 343	10.2 102	66 19	F C	7.7 7.6	157 157	17 .65 52	6.9 .57 35	4.2 .18 11	1.2 .03 2	.0 0.00 1	84 85	4.1 .09 6	5.6 .16 10	.0 .00 00	-- 76 80 71 0.2	
F4 1640.00 Trinity River at Lewiston																		
11/04/70 0455	5050 5050	3.35 245	10.5 92	49.0F 9.4C	7.1 7.6	105 105	-- --	4.2 .18 17	-- .00 88	.0 92	56 88	-- --	5.7 .16 15	.8 .01 1	.00 -- --	42 6E		
01/04/71 1050	5050 5050	2.95 153	11.4 49	41.0F 5.0C	7.1 4.0	88 88	-- --	2.2 .10 11	-- .00 41	.0 80	49 41	-- --	2.1 .06 7	.6 .01 1	.10 -- --	44 3E		
02/01/71 0845	5050 5050	2.98 157	11.0 88	43 6	F C	7.3 7.9	92 92	4.7 .23 27	6.6 .51 60	2.1 .09 11	.6 .02 2	.0 0.00 1	46 75 94	.0 .00 5	1.4 .04 1	.6 .01 00	-- 40 38 37 0.2	
03/01/71 0455	5050 5050	2.99 150	12.0 95	42 6	F C	7.3 7.5	86 86	-- --	2.2 .10 12	-- .00 42	.0 79	48 42	-- --	1.5 .04 5	.0 0.00 00	-- 41 4E		

TABLE D-2 (Continued)  
MINERAL ANALYSIS OF SURFACE WATER  
North Coastal Area

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP PH EC	FIELD LABORATORY	MINERAL CONSTITUENTS IN CA Mg Na K CO <sub>3</sub> HC <sub>03</sub> SO <sub>4</sub> CL NO <sub>3</sub>	MILLIGRAMS PER LITER				MILLIGRAMS PER LITER							
							PERCENT	REACTANCE	VALUE	8 SiO <sub>2</sub>	F SUM	IDS NCH	TH TURB	SAR				
F4 1640.00 TRINITY RIVER AT LEWISTON																		
05/03/71 0730	5050 5050	4.43 824	10.9 89	44 7	F C	7.1 7.1	83	-- --	2.0 .09 11	-- --	.00 .75 .90	46 2	-- .02 2	.8 .00	.00 --	38 2E		
07/19/71 0800	5050 5050	2.99 150	11.3 105	54 12	F C	7.2 7.4	84	-- --	2.3 .10 12	-- --	.00 .79 .94	48 7	-- .06 7	2.1 .00	.00 --	40 2E		
09/13/71 0750	5050 5050	3.23 238	9.7 84	48 9	F C	7.4 7.5	84	4.4 .22 24	0.8 .56 .62	2.3 .10 .02 2	.00 .80 .93	49 3	1.3 .03 3	1.0 .00	.00 --	32 41		
CONTINUED																		
F5 1100.00 MAD RIVER NEAR APTOS																		
11/10/70 0930	5050 5050	7.88 2120	10.9 99	52.0F 11.1C	7.3	124	--	--	3.2 .14 11	--	.00 .92 .74	56 9	-- .11 9	3.8 10	--	53 230E		
01/05/71 1150	5050 5050	7.12 1560	13.3 101	39.2F 4.0C	7.1 7.8	111	--	--	2.6 .11 10	--	.00 .87 .78	53 5	-- .06 5	2.0 10	--	50 100E		
03/01/71 1445	5050 5050	7.50 1740	12.1 101	46 8	F C	7.1 7.6	109	13 .05 59	2.8 .23 21	3.8 .17 15	1.9 .05 5	0.0 .00 .81	48 8	3.8 .10 8	.9 1	.00 --	93 53	
05/03/71 1430	5050 5050	6.88 960	10.5 95	52 11	F C	7.3 7.5	121	--	--	3.1 .13 11	--	.00 .97 .80	59 4	-- .05 4	1.9 13	--	54 90E	
07/19/71 1430	5050 5050	4.69 40	10.3 117	72 22	F C	8.2 8.2	216	33 1.65 71	5.5 .45 19	4.4 .19 8	1.2 .03 1	.00 .00 .82	114 13	4.9 .14 6	.00 12	--	124 118	
09/14/71 0850	5050 5050	4.67 27	10.6 109	63 17	F C	7.9 8.2	212	--	--	4.2 .18 8	--	.00 .00 .89	115 5	-- .11 5	3.9 11	--	103 2E	
F5 5100.00 REDWOOD CREEK AT ORICK																		
10/20/70 0900	5050 5050	5.12 70	10.0 92	53.6F 12.0C	7.1 7.5	156	--	--	5.8 .25 16	--	.00 .85 .54	52 15	-- .23 15	8.3 10	--	63 15E		
11/10/70 0830	5050 5050	10.6 1930	9.9	54.0F 12.2C	7.3 7.4	117	16 .60 72	1.4 .12 11	3.4 .15 14	1.4 .04 4	.0 .00 4	42 .69 64	12 .25 23	4.2 .12 11	1.0 .02 2	-- 82 60		
12/08/70 1000	5050 4910	0.17 102	11.6 102	50.0F 10.0C	7.1 7.4	74	--	--	2.4 .10 14	--	.0 .00 .52	32 70	-- .09 12	3.2 10	--	30 560E		
01/05/71 1100	5050 5050	7.63 1460	12.9 98	39.2F 4.0C	7.0 7.6	84	--	--	2.5 .11 13	--	.0 .00 .56	34 67	-- .08 10	2.9 10	--	35 90E		
02/01/71 1515	5050 5050	7.17 930	11.8 102	48 9	F C	7.1 7.6	88	13 .65 76	.0 .07 8	2.8 .12 14	.8 .02 2	.0 .00 .62	38 70	6.4 .13 15	.2 10	-- 48 47		
03/01/71 1545	5050 5050	7.66 1440	12.2 102	46 8	F C	7.1 7.5	90	--	--	2.8 .12 13	--	.0 .00 .59	36 66	-- .09 10	3.3 10	--	38 90E	
04/06/71 1005	5050 1350	7.52 99	11.2 10	50 C	F C	7.2 7.4	82	--	--	2.8 .12 15	--	.0 .00 .74	37 61	-- .09 11	3.1 11	--	32 70E	
05/03/71 1415	5050 5050	7.11 850	10.7 97	52 11	F C	7.2 7.4	90	--	--	2.6 .11 12	--	.0 .00 .61	37 68	-- .07 8	2.4 8	--	38 60E	
06/22/71 0930	5050 5050	5.66 156	10.6 107	61 16	F C	7.3 8.3	129	--	--	4.3 .19 15	--	.0 .00 .98	60 76	-- .11 9	4.0 11	--	56 1E	
07/20/71 0955	5050 5050	5.47 106	10.0 105	64 13	F C	7.3 7.5	146	--	--	4.7 .20 14	--	.0 .00 1.08	66 74	-- .14 10	5.0 10	--	64 2E	
08/16/71 1330	5050 5050	5.26 47	10.0 112	70.7F 21.5C	7.2 7.7	156	--	--	5.0 .22 14	--	.0 .00 1.15	70 74	-- .17 11	6.2 11	--	70 1E		
09/13/71 1335	5050 5050	5.17 33	10.7 117	68 20	F C	7.4 7.7	160	--	--	4.7 .20 13	--	.0 .00 1.18	72 74	-- .20 13	7.2 13	--	69 2E	
F6 1100.00 EEL RIVER AT SCOTIA																		
10/20/70 1525	5050 5000	14.5 200	59.9F 145	8.3 15.5C	7.3	353	44 2.20 58	13 1.07 28	11 .48 13	1.6 .04 1	.0 .00 1	186 3.05 82	25 .52 14	6.0 .17 5	.1 .00 19.0	211	164 11 0.4	
11/10/70 1630	5050 5000	6.02 18000	10.7 103	57 14	F C	7.8 7.7	180	20 1.00 54	6.6 .54 29	5.7 .05 14	1.9 .00 3	.0 .00 68	75 1.23 20	18 .37 9	5.5 .16 3	2.8 .05 18.0	115	77 16 225A
12/08/70 1330	5050 5000	3.51 64600	10.8 99	53 12	F C	7.4 7.1	139	14 .70 49	5.6 .46 32	4.9 .21 15	1.9 .05 4	.0 .00 74	62 1.23 17	11 .23 9	4.1 .12 1	.9 .01 20	85	58 7 30A
01/05/71 1400	5050 5000	12.6 10900	41.0F 98	5.0C 5.0C	7.1 7.7	197	17 .85 45	9.1 .75 39	6.2 .27 14	1.4 .04 2	.0 .00 78	89 1.46 16	15 .31 5	.7 .10 1	.2 .01 20	109	80 7 53A	
02/02/71 1515	5050 5000	3.22 6820	11.5 102	50 10	F C	7.6 7.4	190	22 1.10 55	5.6 .23 32	5.1 .03 12	1.1 .00 2	.0 .00 79	93 1.52 17	16 .33 4	.9 .08 0	.2 .00 10	112	86 11 65A

TABLE D-2 (Continued)  
MINERAL ANALYSIS OF SURFACE WATER  
North Coastal Area

DATE TIME	SAMPLER LAB	G.M. O DEPTH	DO SAT	TEMP PH	FIELD LABORATORY EC	MINERAL CONSTITUENTS IN CA MG NA K CO3 HC03 SO4 CL NO3	MILLIGRAMS PER LITER				MILLIGRAMS PER LITER									
							PERCENT	REACTANCE	VALUE	B	S102	F	TDS	TH	TURB SAR					
F6 1100.00 EEL RIVER AT SCOTIA																				
CONTINUED																				
03/02/71 1215	5050 5000	1.91 3600	13.7 118	48 9	F C	8.2 7.5	295 1.20 40	24 1.32 44	16 .40 13	9.3 .09 3	3.5 2.7 9	-- 1.98 67	121 .69 23	33 .27 9	9.7 .04 1	2.2 1.0 1	.01 13.0 13.0	172	130	20A 0.4
04/06/71 1315	5050 5000	7300	10.6 100	55.0F 12.8C	7.6 7.8	167	1.05 59	21 .49 28	6.0 .21 12	4.9 .02 1	.9 1.0 1	-- 1.46 87	89 15	12 .25 4	2.5 0.7 0.0	.0 0.0 0.0	.01 12.0 12.0	103	77	20A 0.2
05/04/71 1745	5050 5000	4370	10.3 97	55.0F 12.8C	8.1 8.0	253	1.30 48	26 1.07 39	13 .31 11	7.2 .04 1	1.6 1.0 1	-- 1.98 78	121 .48 19	23 .20 8	7.0 .00 0.0	.0 0.0 0.0	.01 13.0 13.0	151	120	5A 0.3
06/23/71 0815	5050 5000	0.03 766	9.5 102	66.2F 19.0C	7.9 7.3	234	1.45 60	29 .64 27	7.8 .28 12	6.5 .03 1	1.1 0.0 1	-- 2.13 84	130 31	15 .11 12	4.0 .00 4	.0 0.0 0.0	.00 6.8 6.8	135	100	1A 0.3
07/20/71 1315	5050 5000	9.33 336	10.0 120	77.0F 25.0C	8.1 8.1	270	1.80 61	36 .77 26	9.6 .34 12	7.8 .03 1	1.2 0.0 1	-- 2.54 82	155 42	20 .12 14	4.1 .01 4	.0 0.0 0.0	.00 8.2 8.2	164	130	1A 0.3
08/17/71 1305	5050 5000	8.96 187	10.7 126	75.2F 24.0C	8.1 8.2	296	1.80 59	36 .81 27	9.8 .38 13	8.8 .04 1	1.4 0.0 1	-- 2.70 90	165 17	8.3 .13 6	4.7 .01 4	.5 0.0 0.0	.01 9.7 9.7	161	130	1A 0.3
09/14/71 1415	5050 5000	8.80 171	14.7 170	73.4F 23.0C	8.4 8.4	289	1.80 58	36 .90 29	11 .38 12	8.8 .01 1	1.7 0.0 1	-- 1.00 30	30 1.61	98 .48	6.9 .19 6	.0 0.0 0.0	.02 7.7 7.7	174	140	1A 0.3
F6 1154.50 EEL RIVER AT SOUTH FORK																				
10/21/70 0815	5050 5050	9.8 80	56.3F 94	13.5C 13.5C	7.6 8.2	349	2.30 62	46 .99 27	12 .36 10	8.2 .04 1	1.4 0.0 1	-- 2.67 74	163 77	37 21	6.9 .19 5	.2 0.0 0.0	.20 -- --	211	166	1E 0.3
11/10/70 1400	5050 5050	10.6 7650	57.0F 102	13.9C 13.9C	7.7 7.3	178	--	--	4.0 .17 10	-- .00 1	.0 1.26 71	-- 1.26	77 71	-- .06 3	2.3 0.0 0.0	.10 -- --	78	260E		
12/08/70 1415	5050 5050	11.8 32500	50.0F 104	10.0C 7.8	7.9 7.8	123	--	--	2.6 .11 9	-- .00 1	.0 1.08 88	-- 66	1.3 88	-- .04 3	1.3 0.0 0.0	.10 -- --	57	760E		
01/05/71 1445	5050 5050	13.0 4640	41.0F 101	5.0C 7.8	7.6 7.8	162	--	--	3.2 .14 9	-- .00 1	.0 1.38 85	-- 84	3.0 85	-- .08 5	3.0 0.0 0.0	.10 -- --	73	65E		
02/02/71 1600	5050 5050	12.0 5340	47 F 102	8 C 8	7.6 8.1	152	--	--	3.5 .15 10	-- .00 1	.0 1.29 85	-- 79	1.9 85	-- .05 3	1.9 0.0 0.0	.10 -- --	74	90E		
03/02/71 1315	5050 5050	12.0 1740	45 F 99	7 C 7	7.5 7.7	184	--	--	4.0 .17 9	-- .00 1	.0 1.44 78	-- 88	3.0 78	-- .08 4	3.0 0.0 0.0	.00 -- --	88	45E		
04/06/71 1425	5050 5050	10.5 4870	55 F 99	13 C 13	7.7 8.0	160	--	--	3.8 .17 11	-- .00 1	.0 1.38 86	-- 84	2.7 86	-- .08 5	2.7 0.0 0.0	.10 -- --	71	80E		
05/04/71 1830	5050 5050	10.3 2690	56 F 98	13 C 13	8.3 8.3	164	--	--	4.3 .19 12	-- .00 1	.0 1.36 83	-- 83	1.4 0.4 2	-- 0.0 2	1.4 0.0 0.0	.10 -- --	78	40E		
06/23/71 0850	5050 5050	9.5 470	68 F 104	20 C 98	7.8 8.2	217	1.40 63	28 .57 26	5.0 .22 10	1.3 .03 1	.0 0.0 1	-- 1.82 83	111 1.82	15 31	2.5 .07 3	.0 0.0 0.0	.10 -- --	114	99	1E 0.2
07/20/71 1350	5050 5050	9.4 160	77.9F 114	25.5C 22	7.9 8.1	273	--	--	6.6 .29 11	-- .00 1	.0 2.29 84	-- 140	3.8 140	-- .11 4	3.8 0.0 0.0	.00 -- --	132	1E		
08/17/71 1345	5050 5050	10.0 70	72 F 113	22 C 22	7.8 8.1	301	--	--	7.1 .31 10	-- .00 1	.0 2.46 82	-- 150	4.6 82	-- .13 4	4.6 0.0 0.0	.40 -- --	146	1E		
09/14/71 1445	5050 5050	9.0 60	73 F 104	23 C 23	7.8 8.2	314	--	--	7.2 .31 10	-- .00 1	.0 2.52 80	-- 154	7.1 20	-- .20 6	7.1 0.0 0.0	.10 -- --	154	2E		
F6 1329.50 EEL RIVER ABOVE OUTLET CREEK NEAR DOS RIOS																				
10/21/70 1235	5050 5050	1.92 10	54.5F 98	12.5C 12.5C	7.9 8.3	282	--	--	11 .48 17	-- .00 1	.0 1.97 70	-- 120	8.9 1.97	-- .25 9	.3 0.0 0.0	.60 -- --	119	10E		
11/11/70 0900	5050 5050	2.76 205	55.0F 99	12.8C 12.8C	7.5 7.9	181	1.00 55	20 .48 27	5.8 .30 17	1.1 .03 2	.0 0.0 1	-- 82	13 1.34	4.8 1.34	-- .27 8	2.4 .04 2	.40 -- --	108	74	50E 0.3
12/09/70 0930	5050 5720	9.23 100	46.0F 7.8C	7.3 7.6	108	--	--	2.9 .13 12	-- .00 1	.0 0.92 85	-- 56	1.8 0.5	-- .05 5	.1 .00 0.0	.20 -- --	48	230			
01/06/71 1300	5050 5050	4.43 978	38.3F 99	3.5C 8.0	7.2 8.0	136	--	--	3.8 .17 12	-- .00 1	.0 1.11 82	-- 68	2.2 0.0	-- .06 4	.3 0.0 0.0	.20 -- --	67	40E		
02/03/71 0910	5050 5050	4.55 990	12.8 101	42 F 6 C	7.6 7.8	122	--	--	3.6 .16 13	-- .00 1	.0 1.11 91	-- 64	1.0 0.0	-- .03 2	.1 0.0 0.0	.00 -- --	54	70E		
03/03/71 0900	5050 5050	2.69 136	11.8 99	46 F 8 C	7.7 8.0	179	1.05 57	21 .53 29	5.4 .23 13	5.4 .02 1	.7 0.0 1	-- 84	9.7 1.46	3.0 2.0	.0 0.08 5	.0 0.0 0.0	.20 -- --	129	79	5E 0.3
04/07/71 0955	5050 5050	3.71 349	10.7 97	52 F 11 C	7.8 7.9	157	--	--	4.4 .19 12	-- .00 1	.0 1.31 83	-- 80	3.0 1.31	-- .08 83	.1 0.0 0.0	.10 -- --	68	15E		

TABLE D-2 (Continued)  
MINERAL ANALYSIS OF SURFACE WATER  
North Coastal Area

DATE TIME	SAMPLE# LAB	O.M. D DEPTH	DO SAT	TEMP PH	FIELD LABORATORY EC	MINERAL CONSTITUENTS IN CA MG NA K CO3 HCO3 SO4 CL NO3	MILLIGRAMS PER LITER			MILLIGRAMS PER LITER											
							PERCENT	REFRACTANCE	VALUE	B	F	TOS	TH	TURB	SAR						
F6 1329.50 EEL RIVER ABOVE OUTLET CREEK NEAR DOS RIOS																					
CONTINUED																					
05/05/71 0825	5050 5050	3.42 260	9.9 95	57 14	F C	7.7 7.7	169	-- 12	4.7 .20	-- .00	.0 1.36	.83 60	-- 3	1.9 .05	.1 .00	.10 --	-- --	79 10E			
06/23/71 1205	5050 5050	2.65 30	11.1 133	77 25	F C	8.2 8.3	221	--	-- 16	8.3 .36	-- 1.90	.116 86	-- 5	3.7 .10	.0 .00	.30 --	-- --	94 2E			
07/21/71 0645	5050 5050	2.56 13	6.8 80	75 24	F C	7.5 7.7	240	--	-- 18	9.8 .43	-- .00	.114 1.87	.78	-- 5	4.7 .13	.0 .00	.30 --	-- --	106 1E		
08/16/71 0815	5050 5050	2.46 10	8.2 91	70 21	F C	7.9 8.1	239	--	-- 18	9.8 .43	-- .00	.112 1.84	.77	-- 7	5.5 .16	.0 .00	.50 --	-- --	103 1E		
09/15/71 0750	5050 5050	2.43 8.4	7.0 76	68 20	F C	7.6 7.9	250	--	-- 18	10 .44	-- .00	.122 2.00	.80	-- 7	6.2 .17	.1 .00	.40 --	-- --	109 2E		
F6 1350.00 OUTLET CREEK NEAR LONGVALE																					
10/20/70 1215	5050 5050	3.4 3.4	10.0 95	55.4F 13.0C	7.9 8.0	342	--	-- 22	17 .74	-- .00	.0 2.10	128 61	-- 30	36 1.02	-- --	2.80 --	-- --	136 1E			
11/11/70 0845	5050 5050	10.6 244	10.6 99	54.0F 12.2C	7.3 7.5	132	12 45	5.4 .44	.25 33	5.8 .25	1.2 .03	.0 0.00	.53 72	6.4 .13	6.4 .18	1.7 .03	.40 2	-- --	87 52	85E 9	
12/09/70 0900	5050 5050	4.51 1730	11.5 99	48.0F 8.9C	7.1 7.6	74	--	-- 16	2.8 .12	-- .00	.0 0.00	.38 62	-- 84	2.8 .08	-- 11	.10 --	-- --	32 115E			
01/06/71 1325	5050 5050	3.15 375	13.0 99	39.2F 4.0C	7.3 7.8	111	--	-- 15	3.8 .17	-- .00	.0 0.00	.56 83	-- 14	5.7 .16	-- --	.20 --	-- --	47 7E			
02/03/71 0850	5050 5050	2.36 150	12.3 99	43 6	F C	7.8 7.8	138	--	-- 18	5.7 .25	-- .00	.0 1.13	.69 82	-- 12	5.9 .17	-- --	.30 --	-- --	62 7E		
03/05/71 0830	5050 5050	2.06 85	11.7 98	46 8	F C	7.4 7.7	160	--	-- 17	6.2 .27	-- .00	.0 1.29	.79 81	-- 11	6.0 .17	-- --	.40 --	-- --	67 4E		
04/07/71 0820	5050 5050	2.55 225	10.8 98	52 11	F C	7.6 7.9	133	17 62	3.3 .27	5.5 .24	.8 .02	.0 0.00	.69 1.13	3.6 90	1.8 .07	.1 .05	.30 0.00	-- --	95 56	7E 1	
05/05/71 0800	5050 5050	2.26 130	9.9 94	56 13	F C	7.4 7.5	141	--	-- 17	5.5 .24	-- .00	.0 1.11	.68 79	-- 6	2.8 .08	-- 6	.20 --	-- --	46 80E		
06/23/71 1130	5050 5050	1.38 12	10.0 118	75 24	F C	8.2 8.3	233	--	-- 21	11 .48	-- .00	.0 2.02	.123 87	-- 11	9.2 .26	-- 11	1.00 --	-- --	100 1E		
07/21/71 0625	5050 5050	1.20 3.9	6.5 75	73 23	F C	7.7 8.0	260	--	-- 22	13 .37	-- .00	.0 2.18	.133 84	-- 14	13 .37	-- 14	1.20 --	-- --	110 1E		
08/18/71 0745	5050 5050	1.14 1.6	7.3 81	70 21	F C	7.9 8.1	276	--	-- 22	14 .61	-- .00	.0 2.20	.134 80	-- 20	19 .54	-- 20	2.00 --	-- --	115 1E		
09/15/71 0725	5050 5050	1.11 1.4	6.5 70	67.1F 19.5C	7.9 8.1	304	--	-- 23	16 .70	-- .00	.0 2.29	.140 75	-- 24	26 .73	-- --	2.50 --	-- --	131 1E			
F6 3009.01 EEL RIVER MIDDLE FORK AT DOS RIOS																					
10/21/70 1320	5050 5050	8.29 33	10.2 98	56.3F 13.5C	8.0 8.0	400	47 2.35	14 1.15	13 .57	1.6 .04	.0 .00	112 1.84	78 1.62	22 .62	.0 .00	.20 --	-- --	240 231	175 83	35E 0.4	
11/11/70 1215	5050 5050	0.51 1310	11.0 104	55.0F 12.8C	7.6 7.7	181	--	-- 12	4.8 .21	-- .00	.0 1.23	.75 68	-- 6	3.5 .10	.9 .01	.10 1	-- --	78 180E			
12/09/70 1030	5050 5050	3.90 8040	12.0 99	45.0F 7.2C	7.8 7.7	126	--	-- 9	2.6 .11	-- .00	.0 1.08	.66 86	-- 2	.9 .03	.0 .00	.10 --	-- --	58 560E			
01/06/71 1220	5050 5050	0.62 1520	13.7 101	37.4F 3.0C	7.5 7.9	180	--	-- 9	4.0 .17	-- .00	.0 1.44	.88 80	-- 4	2.5 .07	.1 .00	.10 --	-- --	88 55			
02/03/71 1000	5050 5050	0.96 2390	13.3 107	43 6	F C	7.6 7.9	138	--	-- 9	2.8 .12	-- .00	.0 1.21	.74 88	-- 2	1.0 .03	.1 .00	.00 --	-- --	63 180E		
03/03/71 0945	5050 5050	9.71 792	12.5 100	43 6	F C	7.6 7.9	170	--	-- 8	3.1 .13	-- .00	.0 1.41	.86 83	-- 8	.0 .00	.0 .00	.00 --	-- --	78 30E		
04/07/71 1000	5050 5050	1.31 2550	11.5 100	49 9	F C	7.6 7.8	140	--	-- 10	3.2 .14	-- .00	.0 1.20	.73 86	-- 3	1.3 .04	.1 .00	.00 --	-- --	62 90E		
05/05/71 0900	5050 5050	0.89 2030	10.8 98	52 11	F C	7.6 8.0	133	16 .80	5.1 .42	3.0 .13	.9 .02	.0 .00	7.6 1.15	7.6 .87	.4 .16	.1 .01	.10 0.00	-- --	68 68	62 4	70E 0.2
06/23/71 1300	5050 5050	0.95 245	9.5 108	72 22	F C	8.2 8.3	182	--	-- 20	5.5 .37	-- .00	.0 1.46	.89 80	-- 3	2.0 .06	.0 .00	.00 --	-- --	83 2E		

TABLE D-2 (Continued)

MINERAL ANALYSIS OF SURFACE WATER

North Coastal Area

DATE TIME	SAMPLER LAB	G.M. O DETH	DO SAT	TEMP PH	FIELD LABORATORY EC	MINERAL CONSTITUENTS IN CA MG NA K CO3 HCO3 SO4 CL ND3	MILLIGRAMS PER LITER				MILLIGRAMS PER LITER				
							PERCENT FACTANCE	VALUE	B 5102	F SUM	TDS	TH NCH	TURB SAR		
F6 3009.01 EEL RIVER MIDDLE FORK AT DOS RIUS															
07/21/71 0750	5050 5050	8.39 64	9.7 101	73 23	F C	7.9 8.0	260	--	--	6.8 .30 .12	--	.0 .00	119 1.95 75	--	5.4 .15 .6
08/14/71 0910	5050 5050	8.10 22	9.6 109	71.6F 22.0C	8.0 8.3		306	--	--	8.1 .35 .11	--	.0 .00	123 2.02 66	--	11 .31 .00 10
09/15/71 0845	5050 5050	8.03 16	9.4 103	68 20	F C	8.0 8.0	318	--	--	9.8 .43 .14	--	.0 .00	106 1.74 55	--	15 .42 .00 13
F6 3050.00 MILL CREEK NEAR COVLO															
11/11/70 1015	5050 5050	8.28 22	9.9 93	55.0F 12.8C	7.4 7.5		204	--	--	6.8 .30 .14	--	.0 .00	89 1.46 70	--	5.5 .16 .8
12/09/70 1245	5050 5050	5.66 350	11.0 93	47.0F 4.3C	7.3 7.8		126	12 45	6.1 .50 .38	4.1 .18 .14	1.6 .04 .3	.0 .00	65 1.07 88	4.8 .10 8	1.4 .04 .3 1
01/06/71 1130	5050 5050	5.66 130	12.8 95	37.4F 3.0C	7.1 7.7		196	--	--	4.9 .21 .11	--	.0 .00	104 1.70 87	--	3.0 .08 .4
02/03/71 1045	5050 5050	8.61 94	11.2 90	43 6	F C	7.5 8.0	230	--	--	6.0 .26 .11	--	.0 .00	136 2.23 97	--	2.7 .08 .3
03/03/71 1030	5050 5050	8.24 45	12.0 102	47 6	F C	7.9 7.9	278	--	--	6.4 .28 .10	--	.0 .00	162 2.66 96	--	3.8 .11 .4
04/07/71 1030	5050 5050	8.84 120	10.4 94	52 11	F C	7.6 7.9	221	--	--	6.0 .26 .12	--	.0 .00	124 2.03 92	--	3.2 .09 .4
05/05/71 1000	5050 5050	8.39 44	9.7 95	58 14	F C	7.6 7.8	266	--	--	8.3 .36 .14	--	.0 .00	156 2.56 96	--	2.8 .08 .00
06/23/71 1325	5050 5050	7.74 2.1	9.8 122	81 27	F C	7.8 6.4	334	34 1.70	18 1.48	.11 .48 .40	1.4 .04 .07	2.0 .07	196 3.21 88	11 .23 6	4.6 .13 .00
F6 3200.00 BLACK BUTTE RIVER NEAR COVELO															
10/21/70 1455	5050 5050	4.90 17	9.7 93	56.3F 13.5C	7.9 8.0		393	61 3.04 73	9.0 .74 .18	7.6 .33 8	1.3 .03 1	.0 .00	124 2.03 48	99 2.06 49	3.4 .10 .2
11/11/70 1115	5050 5050	5.84 149	11.2 103	53.0F 11.7C	7.6 7.7		238	--	--	4.6 .20 .8	--	.0 .00	82 1.34 56	--	2.1 .06 .5 3
12/09/70 1145	5050 5050	6.53 500	12.0 103	48.0F 8.9C	7.6 7.8		127	--	--	2.2 .10 .8	--	.0 .00	63 1.03 81	--	1.7 .05 .1 4
01/06/71 1030	5050 5050	5.98 230	13.4 98	36.5F 2.5C	7.5 7.9		188	--	--	3.4 .15 .8	--	.0 .00	85 1.39 74	--	1.0 .03 .0 2
02/03/71 1125	5050 5050	5.76 630	13.2 100	39 4	F C	7.7 7.9	135	--	--	2.6 .11 .8	--	.0 .00	66 1.08 80	--	.1 .00 .0
03/03/71 1115	5050 5050	4.50 190	12.2 97	42 6	F C	7.6 7.8	160	--	--	2.4 .10 .6	--	.0 .00	75 1.23 77	--	.5 .01 .0
04/07/71 1140	5050 5050	5.56 530	11.2 98	49 9	F C	7.7 7.7	143	--	--	2.8 .12 .8	--	.0 .00	68 1.11 76	--	.4 .01 .0
05/05/71 1045	5050 5050	4.89 300	10.8 97	51 11	F C	7.5 7.9	135	19 .95 66	4.1 .34 .24	2.9 .13 .9	.9 .02 1	.0 .00	67 1.10 81	12 .25 19	.1 .00 .1
06/23/71 1420	5050 5050	3.82 60	9.9 103	53 23	F C	7.9 6.1	208	--	--	4.0 .17 .8	--	.0 .00	98 1.61 77	--	1.7 .05 .0 2
07/21/71 0905	5050 5050	3.49 21	8.5 98	73 23	F C	7.9 8.1	256	--	--	5.3 .23 .9	--	.0 .00	114 1.87 73	--	1.0 .03 .1 1
08/14/71 1000	5050 5050	3.26 7.5	8.9 103	73 23	F C	8.1 8.1	301	--	--	6.1 .27 .9	--	.0 .00	126 2.07 69	--	2.7 .08 .0 3
09/15/71 0950	5050 5050	3.19 6.0	8.8 98	70 21	F C	8.1 8.1	322	--	--	6.2 .27 .8	--	.0 .00	126 2.07 64	--	2.8 .08 .0 2
F6 4100.00 EEL RIVER SOUTH FORK NEAR MIRANDA															
10/21/70 0945	5050 5050	3.64 81	9.7 92	55.4F 13.0C	7.8 8.1		298	35 1.75 54	12 .99 31	10 .44 1	1.5 .04 1	.0 .00	151 2.47 78	22 .46 15	8.2 .23 .7
11/10/70 1445	5050 5050	7.11 2800	10.5 100	56.0F 13.3C	7.4 7.4		148	--	--	5.6 .24 .16	--	.0 .00	65 1.07 72	--	4.1 .12 .8 2
12/09/70 1500	5050 5050	2.39 1560	11.0 102	54.0F 12.2C	7.4 7.6		98	--	--	3.8 .17 .17	--	.0 .00	49 .80 .08	--	3.0 .08 .1 2

TABLE D-2 (Continued)  
MINERAL ANALYSIS OF SURFACE WATER  
North Coastal Area

DATE TIME	SAMPLER LAB	G.M. O DEPTH	NO SAT	TEMP PH	FIELD LABORATORY EC	MINERAL CONSTITUENTS IN CA MG NA K CO <sub>3</sub> HC <sub>03</sub> SO <sub>4</sub> CL NO <sub>3</sub>	MILLIGRAMS PER LITER				MILLIGRAMS PER LITER								
							PERCENT	REFRACTANCE VALUE	B SiO <sub>2</sub>	F TDS SUM	TH NCH	TURB SAR							
F6 4100.00 EEL RIVER SOUTH FORK NEAR MIRANDA																			
01/05/71 1530	5050 5050	7.13 2570	12.6 100	41.9F 5.5C	7.1 8.0	127	12 .60 47	5.1 .42 33	5.5 .24 19	.8 .02 2	.0 1.00 0.00	61 63	5.3 .11 9	3.4 .10 8	.00 0.00 0.00	.10 -- --	64 62	51 1	45E 0.3
02/02/71 1630	5050 5050	6.04 1200	11.9 104	49 F 9 C	7.3 7.9	144	--	--	5.4 .23 16	-- .00 84	.0 1.21	74 84	-- --	3.2 .09 6	.1 0.00	.00 --		60	35E
03/02/71 1400	5050 5050	5.44 688	12.7 106	46 F 8 C	7.7 7.9	175	--	--	5.3 .23 13	-- .00 81	.0 1.41	86 81	-- --	4.0 .11 6	.1 0.00	.00 --		75	10E
04/06/71 1505	5050 5050	6.33 1500	10.8 102	55 F 13 C	7.5 7.8	137	--	--	5.0 .22 16	-- .00 88	.0 1.21	74 7	-- --	3.6 .10	.00 0.00	.00 --		58	20E
05/05/71 0610	5050 5050	5.56 772	9.8 94	57 F 14 C	7.4 7.6	152	--	--	5.2 .23 15	-- .00 80	.0 1.21	74 5	-- --	2.8 .09	.1 0.00	.00 --		65	4E
06/23/71 0930	5050 5050	4.59 176	9.2 101	68 F 20 C	7.9 8.2	204	--	--	8.0 .35 17	-- .00 81	.0 1.66	101 81	-- --	5.2 .15 7	.00 0.00	.00 --		88	2E
07/20/71 1445	5050 5050	4.39 93	10.8 134	81 F 27 C	8.3 8.3	232	--	--	9.1 .40 17	-- .00 88	.0 2.05	125 88	-- --	5.0 .14 6	.00 0.00	.00 --		107	2E
08/17/71 1430	5050 5050	4.29 62	16.4 193	75 F 24 C	8.3 8.8	198	--	--	9.1 .40 20	-- .00 74	5.0 .17	89 74	-- --	7.2 .20 10	.00 0.00	.30 --		88	1E
09/14/71 1515	5050 5050	4.0 140	13.5 159	75 F 24 C	8.4 8.6	226	--	--	9.3 .40 18	-- .00 75	5.0 1.7	104 75	-- --	7.1 .20 9	.1 0.00	.10 --		101	2E
F6 5279.00 VAN DUZEN RIVER NEAR BRIDGEVILLE																			
10/20/70 1400	5050 5050	4.66 27	11.5 116	60.8F 16.0C	8.2 8.0	314	--	--	8.5 .37 12	-- .00 70	.0 2.21	135 70	-- --	6.0 .17	.00 0.00	.10 --		143	3E
11/10/70 1215	5050 5050	7.27 2100	11.5 104	52.0F 11.1C	7.6 7.4	143	--	--	2.9 .13 9	-- .00 76	.0 1.08	66 76	-- --	1.7 .05 3	.00 0.00	.10 --		64	230E
12/08/70 1230	5050 5050	0.96 9000	11.8 103	49.0F 9.4C	7.3 7.5	110	--	--	2.4 .10 9	-- .00 86	.0 0.95	58 86	-- --	1.7 .05 5	.00 0.00	.10 --		50	800E
01/05/71 1300	5050 5050	12.0 906	12.0 91	39.2F 4.0C	7.1 7.7	151	--	--	3.4 .15 10	-- .00 60	.0 1.21	74 60	-- --	1.8 .05 3	.00 0.00	.10 --		71	60E
02/02/71 1415	5050 5050	6.21 659	12.2 104	47 F 8 C	7.4 8.0	124	--	--	2.6 .11 9	-- .00 85	.0 1.05	64 85	-- --	1.7 .05 4	.00 0.00	.00 --		58	25E
03/02/71 1130	5050 5050	6.04 520	13.0 103	42 F 6 C	7.4 7.8	148	18 .90 60	4.9 .40 26	4.0 .17 11	1.4 .04 3	.0 .00 1.13	69 81	10 .21	1.8 .05	.2 .00	.00 --		111	65 9 0.2
04/06/71 1155	5050 5050	6.50 650	10.9 99	52 F 11 C	7.4 7.8	126	--	--	2.8 .12 10	-- .00 87	.0 1.10	67 87	-- --	1.9 .05 4	.00 0.00	.00 --		55	30E
05/04/71 1650	5050 437	6.04 437	10.4 95	53 F 12 C	7.5 7.7	138	--	--	3.0 .13 9	-- .00 80	.0 1.10	67 80	-- --	1.4 .04 3	.00 0.00	.00 --		62	15E
06/22/71 1505	5050 5050	5.21 83	9.1 107	75 F 24 C	8.1 8.3	193	--	--	5.1 .22 11	-- .00 86	.0 1.66	101 86	-- --	1.8 .05 3	.00 0.00	.10 --		89	0E
07/21/71 1155	5050 5050	5.02 36	9.5 112	75 F 24 C	8.2 8.3	230	--	--	6.6 .29 13	-- .00 86	.0 1.97	120 86	-- --	2.4 .07 3	.00 0.00	.00 --		106	2E
08/17/71 1145	5050 5050	4.86 18	10.5 119	72 F 22 C	8.1 8.3	264	--	--	7.1 .31 12	-- .00 84	.0 2.21	135 84	-- --	4.1 .12 5	.00 0.00	.10 --		126	1E
09/14/71 1305	5050 5050	4.85 14	11.0 125	72 F 22 C	8.2 8.3	267	37 1.85 65	7.4 .61 22	7.5 .33 12	1.4 .04 1	.0 .00 2.20	134 78	25 .52	4.0 .11 4	.1 0.00	.10 --		146	123 13 0.3
F7 1100.00 MATTOLE RIVER NEAR PETKULIA																			
02/02/71 1215	5050 5050	4.18 712	11.8 103	49 F 9 C	7.3 7.9	146	19 .95 66	2.4 .23 16	5.8 .25 17	.6 .02 1	.0 .00 1.08	66 73	12 .25 17	5.1 .14 9	.5 .01 1	.00 0.00	-- --	77 78	59 5 15E
09/14/71 1110	5050 5050	2.94 35	12.4 134	70 F 21 C	8.1 8.2	257	36 1.80 68	5.4 .44 17	8.7 .38 14	1.3 .03 1	.0 .00 1.90	116 73	29 .60 23	3.8 .11 4	.0 .00	.10 --		141 141	112 17 0.4
F7 5100.00 HEAVY RIVER AT CAPE TOWN																			
02/02/71 1140	5050 5050	11.7 50	11.8 101	48 F 9 C	7.5 7.9	182	25 1.25 70	2.8 .23 13	6.4 .28 16	.9 .02 1	.0 .00 1.16	71 63	24 .50 27	5.9 .17 9	.3 .00	.00 --		102 100	74 16 55E
09/14/71 1030	5050 5050	10.4 8.5	11.4 114	48 F 14 C	8.0 8.0	313	46 2.30 69	6.3 .52 14	11 .48 1	1.5 .04 0	.0 .00 2.26	134 69	40 .83 25	7.2 .20 6	.0 .00	.10 --		178 180	141 18 1E

**TABLE D-3**  
**TRACE ELEMENT ANALYSES OF SURFACE WATER**  
**North Coastal Area**

STATION	STATION NUMBER	DATE	CONSTITUENTS IN MICROGRAMS PER LITER																
			(Al)	(Be)	(Bi)	(Cd)	(Co)	(Cr)	(Cu)	(Fe)	(Ge)	(Mn)	(Mo)	(Ni)	(Pb)	(Ti)	(V)	(Zn)	
Eel River above Outlet Creek (5d)	P61329.50	11-11-70 3-3-71	17 10	0.6*	0.3*	1.4*	1.4*	1.4*	1.4*	21	5.7*	0.3*	1.4*	0.3*	3.1	1.4*	1.3	0.3*	5.7*
Eel River, Middle Fork, at Dos Rios (5c)	P63009.01	10-21-70 5-5-71	1.0 12	0.6*	0.3*	1.4*	1.4*	1.4*	1.4*	11	5.7*	0.3*	1.4*	0.3*	0.3*	1.4*	0.6*	0.8	5.7*
Eel River at Scotia (6)	P61100.00	11-10-70 1-5-71	21 31	0.6*	0.3*	1.4*	6.3	1.1	1.4*	60**	5.7*	0.3*	1.1	0.3*	60 **	1.4*	2.0	0.3*	5.7*
Klamath River below Iron Gate Dam (1f)	P31599.01	2-17-71 3-15-71 8-5-71	66 46 1.4*	0.6*	0.3*	1.4*	1.4*	1.4*	1.4*	63	5.7*	0.3*	1.4*	0.3*	0.5	1.4*	0.6*	3.4	5.7*
Klamath River near Klamath (3)	P31100.00	5-3-71 9-13-71	49 13	0.6*	0.3*	1.4*	1.4*	1.4*	1.4*	14	5.7*	0.3*	1.4*	0.3*	2.1	1.4*	1.3	1.8	5.7*
Klamath River at Orleans (2c)	P31220.01	5-3-71 9-13-71	49 11	0.6*	0.3*	1.4*	1.4*	1.4*	1.4*	26	5.7*	0.3*	1.4*	0.3*	2.1	1.4*	2.1	2.1	5.7*
Klamath River near Seiad Valley (2b)	P31430.00	5-10-71 9-21-71	37 34	0.6*	0.3*	1.4*	1.4*	1.4*	1.4*	37	5.7*	0.3*	1.4*	0.3*	2.6	1.4*	0.6*	8.8	5.7*
Mad River near Arcata (6a)	P51100.00	3-1-71 7-19-71	66 6.7	0.6*	0.3*	1.4*	1.4*	1.4*	1.4*	31	5.7*	0.3*	8.3	0.3*	1.7	1.4*	9.1	0.7	5.7*
Trinity River near Hoopa (4)	P41080.00	2-1-71 9-13-71	49 18	0.6*	0.3*	1.4*	1.4*	3.1	1.4*	17	5.7*	0.3*	3.1	0.3*	2.1	1.4*	0.6*	0.9	5.7*

\* Values are less than the amount indicated

\*\* Values are more than the amount indicated

Al - Aluminum  
 Be - Beryllium  
 Bi - Bismuth  
 Cd - Cadmium  
 Co - Cobalt

Cr - Chromium  
 Cu - Copper  
 Fe - Iron  
 Ga - Gallium

Ge - Germanium  
 Mn - Manganese  
 Mo - Molybdenum  
 Ni - Nickel

Pb - Lead  
 Ti - Titanium  
 V - Vanadium  
 Zn - Zinc

**CONSTITUENTS**

**TABLE D-4**  
**MISCELLANEOUS CONSTITUENTS IN SURFACE WATER**  
**North Coastal Area**

Station Number	Station	Date	Constituents Milligrams per liter						Samp	Lab
			As.	Ba.	Cd.	Pb.	Se.	Hg.		
F01300.00	SMITH RIVER NEAR CRESCENT CITY	5-04-71	0.00	0.0	0.00	0.00	0.00	0.0	5050	5050
F21050.00	SHASTA RIVER NEAR YREKA	5-10-71	0.00	0.0	0.00	0.00	0.00	0.0	5050	5050
F25250.00	SCOTT RIVER NEAR FORT JONES	5-10-71	0.00	0.0	0.00	0.00	0.00	0.0	5050	5050
F31100.00	KLAMATH RIVER NEAR KLAMATH	5-03-71	0.00	0.0	0.00	0.00	0.00	0.0	5050	5050
F31220.01	KLAMATH RIVER AT ORLEANS	5-03-71	0.00	0.1	0.00	0.00	0.00	0.0	5050	5050
F31430.00	KLAMATH RIVER NEAR SEIAD VALLEY	5-10-71	0.00	0.1	0.00	0.00	0.00	0.0	5050	5050
F31599.01	KLAMATH RIVER BELOW IRON GATE DAM	5-10-71	0.00	0.0	0.00	0.00	0.00	0.0	5050	5050
F34100.00	SAIMON RIVER AT SOMESBAR	6-21-71	0.00	0.0	0.00	0.00	0.00	0.0	5050	5050
F41080.00	TRINITY RIVER AT HOOPA	5-03-71	0.00	0.0	0.00	0.00	0.00	0.0	5050	5050
F41376.00	TRINITY RIVER NEAR BURNT RANCH	5-03-71	0.00	0.0	0.00	0.00	0.00	0.0	5050	5050
F41640.00	TRINITY RIVER AT LEWISTON	5-03-71	0.00	0.1	0.00	0.00	0.00	0.0	5050	5050
F51100.00	MAD RIVER NEAR ARCATA	5-03-71	0.00	0.0	0.00	0.00	0.00	0.0	5050	5050
F55100.00	REDWOOD CREEK AT ORICK	5-03-71	0.00	0.0	0.00	0.00	0.00	0.0	5050	5050
F61100.00	EEL RIVER AT SCOTIA	5-04-71	0.00	0.1	0.00	0.00	0.00	0.0	5050	5050
F61329.00	EEL RIVER ABOVE OUTLET CREEK NR. DOS RIOS	5-05-71	0.00	0.0	0.00	0.00	0.00	0.0	5050	5050
F61350.00	OUTLET CREEK NEAR LONGVALE	5-05-71	0.00	0.0	0.00	0.00	0.00	0.0	5050	5050
F63009.01	EEL RIVER, MIDDLE FORK AT DOS RIOS	5-05-71	0.00	0.0	0.00	0.00	0.00	0.0	5050	5050
F63200.00	BLACK BUTTE RIVER NEAR COVELO	5-05-71	0.00	0.0	0.00	0.00	0.00	0.0	5050	5050
F64100.00	EEL RIVER, SOUTH FORK NEAR MIRANDA	5-05-71	0.00	0.1	0.00	0.00	0.00	0.0	5050	5050
F65279.00	VAN DUZEN RIVER NEAR BRIDGEVILLE	5-04-71	0.00	0.1	0.00	0.00	0.00	0.0	5050	5050
F71100.00	MATTOLE RIVER NEAR PETROLIA	6-22-71	0.00	0.1	0.00	0.00	0.00	0.0	5050	5050
F60405.01	BEAR RIVER AT CAPE TOWN	6-22-71	0.00	0.2	0.00	0.01	0.01	0.0	5050	5050

**CONSTITUENTS**

As    Arsenic  
Ba    Barium

Cd    Cadmium  
Pb    Lead

Se    Selenium  
Hg    Mercury

TABLE D-5 NUTRIENT ANALYSIS OF SURFACE WATER

Lab and Sampler Agency Codes

5000 - U. S. Geological Survey  
5050 - Department of Water Resources

Abbreviations

TIME - Pacific Standard Time on a 24-hour clock.  
G.H. - Instantaneous gage height in feet above an established datum.  
Q - Instantaneous discharge measured in cubic feet per second (cfs). "E" indicates the value has been estimated.  
TEMP - Water temperature in degrees Fahrenheit (F) or Celsius (C).  
TURB - Jackson Turbidity Units measured with a Hellege Turbidimeter (E) or a Hach Nephelometer (A).  
PH - Measure of acidity or alkalinity of water.  
EC - Electrical conductance in micromhos at 25° C.  
HC03 - Bicarbonate  
CO3 - Carbonate

Nitrogen Series as N

NO<sub>2</sub> - Unfiltered nitrite  
NH<sub>3</sub> - Unfiltered ammonia  
NO<sub>3</sub> - Unfiltered nitrate  
ORG N - Organic nitrogen  
DIS - Dissolved organic nitrogen  
ORG N  
NH<sub>3</sub> + - Ammonia plus organic nitrogen  
ORG N

Phosphorus Series as P

FIL - Filterable acid hydrolyzable phosphate  
A.H.PO<sub>4</sub>  
F PO<sub>4</sub> - Filterable orthophosphate  
U PO<sub>4</sub> - Unfiltered orthophosphate  
F TOT P - Filterable total phosphorus  
U TOT P - Unfiltered total phosphorus

TABLE D-5  
NUTRIENT ANALYSIS OF SURFACE WATER

North Coastal Area

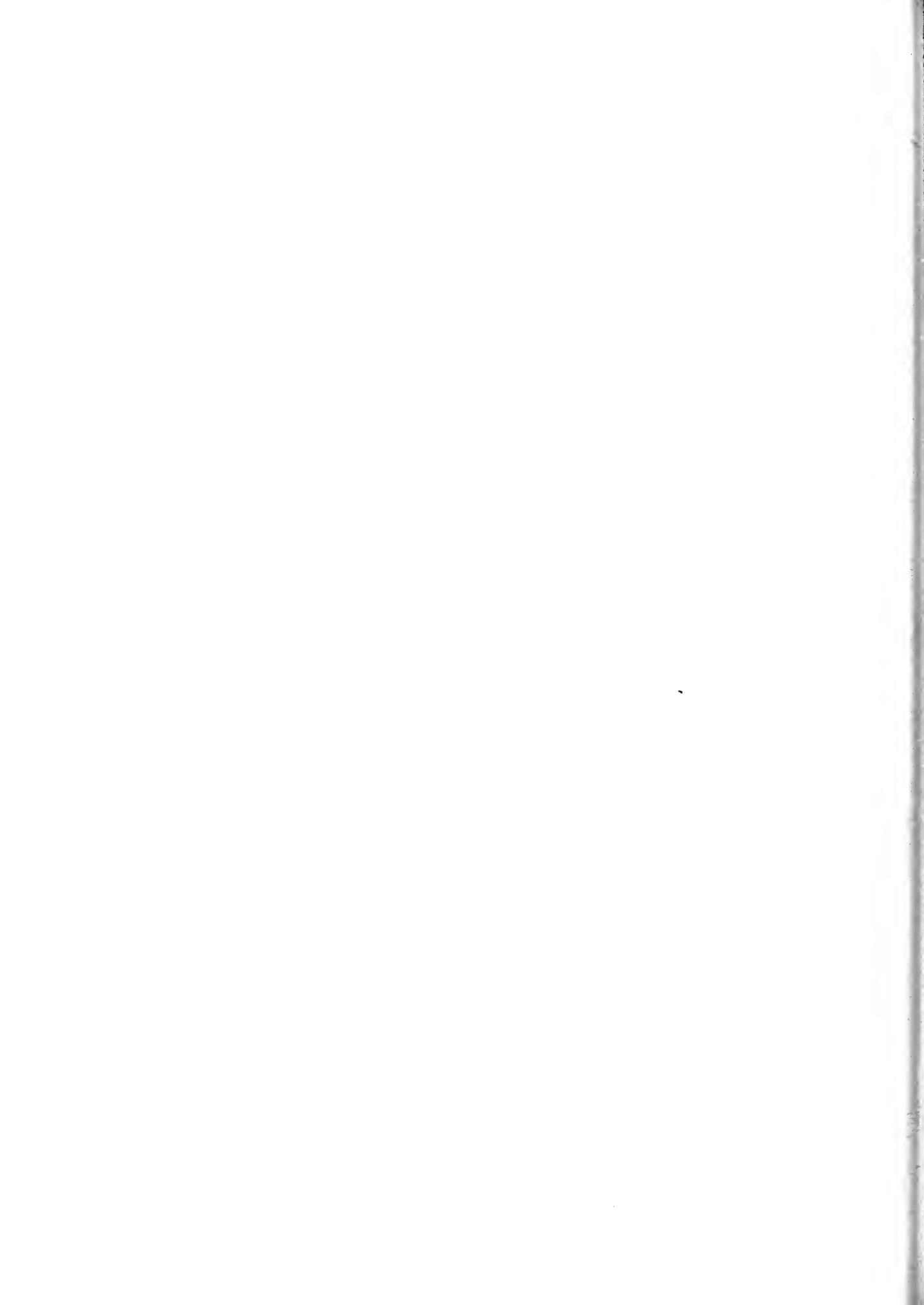
DATE TIME	SAMP LAB	G.M. Q	TEMP TURB	FIELD CO <sub>2</sub> ALK.	FIELD PH	LABORATORY EC	LAH HC <sub>03</sub> CO <sub>3</sub>	NO <sub>2</sub> NH <sub>3</sub>	NUTRIENT CONSTITUENTS IN MILLIGRAMS PER LITER					
									NO <sub>3</sub> ORG N	DIS ORG N	NH <sub>3</sub> + ORG N	FIL. A <sub>2</sub> H <sub>2</sub> PO <sub>4</sub>	F P <sub>04</sub> U P <sub>04</sub>	F U TOT P TOT P
F3 1100.00 Klamath River Near Klamath														
10/19/70 1425	5050 5000	3150	13 C 1A	7.9 7.9	227	120 0			0.02				0.22	
11/09/70 1500	5050 5000	8.35 12900	53 F 170A	7.4 7.5	126	56 0			0.25				2.4	
12/07/70 1545	5050 5000	8.62 84900	48 F 60A	7.5 7.5	120	62 0			0.05				2.9	
1/05/71 1010	5050 5000	4.0C 22700	45A	7.0 7.6	167	83 0			0.23				0.34	
2/01/71 1600	5050 5000	3.56 31500 E	47 F 57A	7.6 7.8	136	75 0			0.16				0.65	
3/01/71 1630	5050 5000	9.16 18000 E	44 F 20A	7.5 7.8	154	80			0.10				0.01	
4/06/71 0910	5050 5000	10 C 44000 E	60A	7.6 7.8	143	79			0.10				0.40	
5/03/71 1455	5050 5000	11.1C 29400 E	30A	7.5 7.9	123	71			0.00				0.18	
6/22/71 0825	5050 5000	4.21 13200	17 C 10A	7.4 7.3	112	66 0			0.02				0.09	
7/20/71 0900	5050 5000	5.81 6000	22.0C 40A	7.5 8.1	144	86 0			0.00				0.17	
8/17/71 0840	5050 5000	4.77 3640	20.5C 1A	7.8 8.1	186	109 0			0.03				0.12	
9/13/71 1425	5050 5000	4.74 3680	21.0C 3A	8.0 7.9	208	118 0			0.02				0.11	
F3 1430.00 Klamath River Near Seiad Valley														
10/06/70 1245	5050 5050	57 F 1560	2E	8.4 7.9	248	125 0			0.27				0.12	
11/16/70 1345	5050 5050	9.0C 4040	6E	7.9 7.7	267	120 0			0.79				0.09	
1/12/71 1415	5050 5050	37 F 5740	9E	7.3 8.0	230	111 0			0.70				0.05	
2/17/71 1215	5050 5050	43 F 5910	12E	7.7 7.9	196	102 0			0.27				0.03	
3/15/71 1445	5050 5050	43 F 7160	19E	7.9 8.3	210	109 0			0.18				0.01	
4/13/71 1145	5050 5050	50 F 10800	55E	7.6 7.9	172	92 0			0.14				0.01	
5/10/71 1450	5050 5050	13 C 12700	11E	7.8 7.9	143	76 0			0.16				0.04	
6/03/71 1140	5050 5050	14.5C 8140	25E	7.8 8.0	171	86 0			0.00				0.02	
7/06/71 1430	5050 5050	19.5C 2240	2E	8.1 8.0	185	107 0			0.00				0.01	
8/05/71 1120	5050 5050	22 C 1500	2E	8.3 7.9	201	109 0			0.05				0.02	
9/21/71 1450	5050 5050	18 C 2080	2E	8.2 7.6	220	113 0			0.32				0.12	
9/22/71 0800	5050 5050	14.8C 6E		7.5	210				0.35	0.6			0.14	
F3 1470.00 Klamath River Above Hamburg Reservoir Site														
11/16/70 1240	5050 5050	8.0C 3300 E	6E	7.6 7.6	288	123 0			0.90				0.12	
1/12/71 1330	5050 5050	36.0F 3590 E	13E	7.4 8.0	253	113 0			0.93				0.07	
3/15/71 1335	5050 5050	42 F 4680 E	15E	8.0 8.6	224	99 5			0.20				0.01	
5/10/71 1410	5050 5050	14 C 7440 E	20E	7.9 7.7	157	79 0			0.27				0.04	
7/06/71 1340	5050 5050	21 C 920 E	4E	8.1 7.8	204	108 0			0.02				0.04	
9/21/71 1345	5050 5050	17 C 1810 E	1E	8.2 7.3	213	107 0			0.36				0.14	
F3 1599.01 Klamath River Below Iron Gate Dam														
10/06/70 1030	5050 5050	57 F 1330	3E	7.8 7.8	208	100 0			0.47				0.14	
11/16/70 1130	5050 5050	8.0C 3070	7E	7.4 7.6	276	108 0			0.95				0.11	
12/14/70 1130	5050 5050	4.0C 5000	20E	7.3 7.4	201	88 0			0.90				0.06	
1/12/71 1215	5050 5050	35.0F 3290	7E	7.1 7.8	225	89 0			1.04				0.06	
2/17/71 1030	5050 5050	5 C 3460	8E	7.5 7.4	195	88 0			0.11				0.06	

TABLE D-5 (Continued)  
NUTRIENT ANALYSIS OF SURFACE WATER  
North Coastal Area

DATE TIME	SAMP LAB	G.H. 0	TEMP TURB	FIELD		FIELD		LAH HC03 C03	NO2 NH3 NH3	NUTRIENT CONSTITUENTS IN MILLIGRAMS PER LITER									
				CO2	ALK.	PH	EC			DIS	NH3 +	FIL.	F PO4	F TOT P	ORG N	ORG N	OKG N	A.H.PO4	U PO4
				F3 1599.01 Klamath River Below Iron Gate Dam												CONTINUED			
3/15/71 1210	5050 5050	3790	39 F 10E			7.3 8.0		81 0			0.14							0.00	
4/13/71 1015	5050 5050	7160	50 F 25E			7.5 7.8		72 145			0.11							0.01	
5/10/71 1245	5050 5050	6900	12 C 10E			7.6 7.5		62 186			0.25							0.06	
6/03/71 0955	5050 5050	4880	15 C 10E			7.4 7.6		66 155			0.00							0.05	
7/06/71 1145	5050 5050	836	19.5C 4E			8.1 7.3		77 160			0.07							0.05	
8/05/71 0945	5050 5050	1000	22 C 7E			8.2 8.3		83 164			0.45							0.04	
9/21/71 1155	5050 5050	1720	17 C 2E			7.9 7.3		89 190			0.38							0.16	
9/22/71 0700	5050 5050	3.75	60.5F 7E			7.3		179			0.41							0.17	0.21
				F4 1080.00 Trinity River at Hoopa															
10/19/70 1015	5050 5050	3.85 530	55.0F 2E			7.6 8.3		102 206			0.00							0.10	
11/09/70 1145	5050 5050	1.78 12700	54.0F 350E			7.0 7.3		90 181			0.45							0.03	
12/07/70 1110	5050 5050	5.33 23200	48.0 420E			7.5 7.7		72 136			0.02							0.07	
1/04/71 1325	5050 5050	8.75 6100	4.0C 55E			7.3 8.0		91 170			0.02							0.00	
2/01/71 1100	5050 5050	0.50 10100	44 F 65E			7.5 8.2		81 147			0.02							0.01	
3/01/71 1125	5050 5050	7.85 4100	41 F 45E			7.5 7.8		84 156			0.00							0.00	
4/05/71 1055	5050 5050	0.02 9920	50 F 70E			7.6 7.9		86 148			0.02							0.00	
5/03/71 1010	5050 5050	9.03 7260	52 F 70E			7.4 7.5		73 136			0.02							0.00	
6/21/71 0940	5050 5050	6.41 2590	17 C 8E			7.5 7.7		73 133			0.00							0.00	
7/19/71 1030	5050 5050	5.53 1660	21 C 190E			7.3 7.5		66 124			0.05							0.00	
8/16/71 1015	5050 5050	4.24 690	20 F 1E			7.8 8.0		102 194			0.00							0.02	
9/13/71 1020	5050 5050	4.12 642	20 C 1E			8.0 8.0		107 202			0.14							0.00	
				F4 1376.00 Trinity River Near Burnt Ranch															
11/09/70 1045	5050 5050	6700 F	49.0F 160F			7.2 7.4		39 81			0.25							0.02	
1/04/71 1145	5050 5050	1900 E	3.0C 2E			7.4 8.2		94 173			0.00							0.01	
3/01/71 1015	5050 5050	1350	40 F 2E			7.5 7.9		84 152			0.00							0.00	
5/03/71 0450	5050 5050	2830	50 F 3E			7.4 7.9		64 117			0.02							0.00	
7/19/71 0930	5050 5050	885	20 C 25E			7.3 7.4		50 90			0.02							0.00	
9/13/71 0920	5050 5050	343	19 C 1E			7.7 7.6		84 157			0.00							0.00	
				F4 1640.00 Trinity River at Lewiston															
11/09/70 0855	5050 5050	3.35 245	49.0F 6E			7.1 7.6		56 105			0.18							0.00	
1/04/71 1030	5050 5050	2.94 153	5.0C 1E			7.1 8.0		49 88			0.14							0.00	
2/01/71 0845	5050 5050	2.94 157	43 F 3E			7.3 7.9		46 92			0.14							0.00	
3/01/71 0955	5050 5050	2.94 150	42 F 4E			7.3 7.5		48 46			0.00							0.00	
5/03/71 0730	5050 5050	4.43 824	44 F 2E			7.1 7.1		46 83			0.02							0.00	
7/19/71 0900	5050 5050	2.99 150	12 C 2F			7.2 7.4		48 84			0.00							0.00	
9/13/71 0750	5050 5050	3.23 234	9 C 1F			7.4 7.5		44 84			0.00							0.00	

**TABLE D-5 (Continued)**  
**NUTRIENT ANALYSIS OF SURFACE WATER**  
**North Coastal Area**

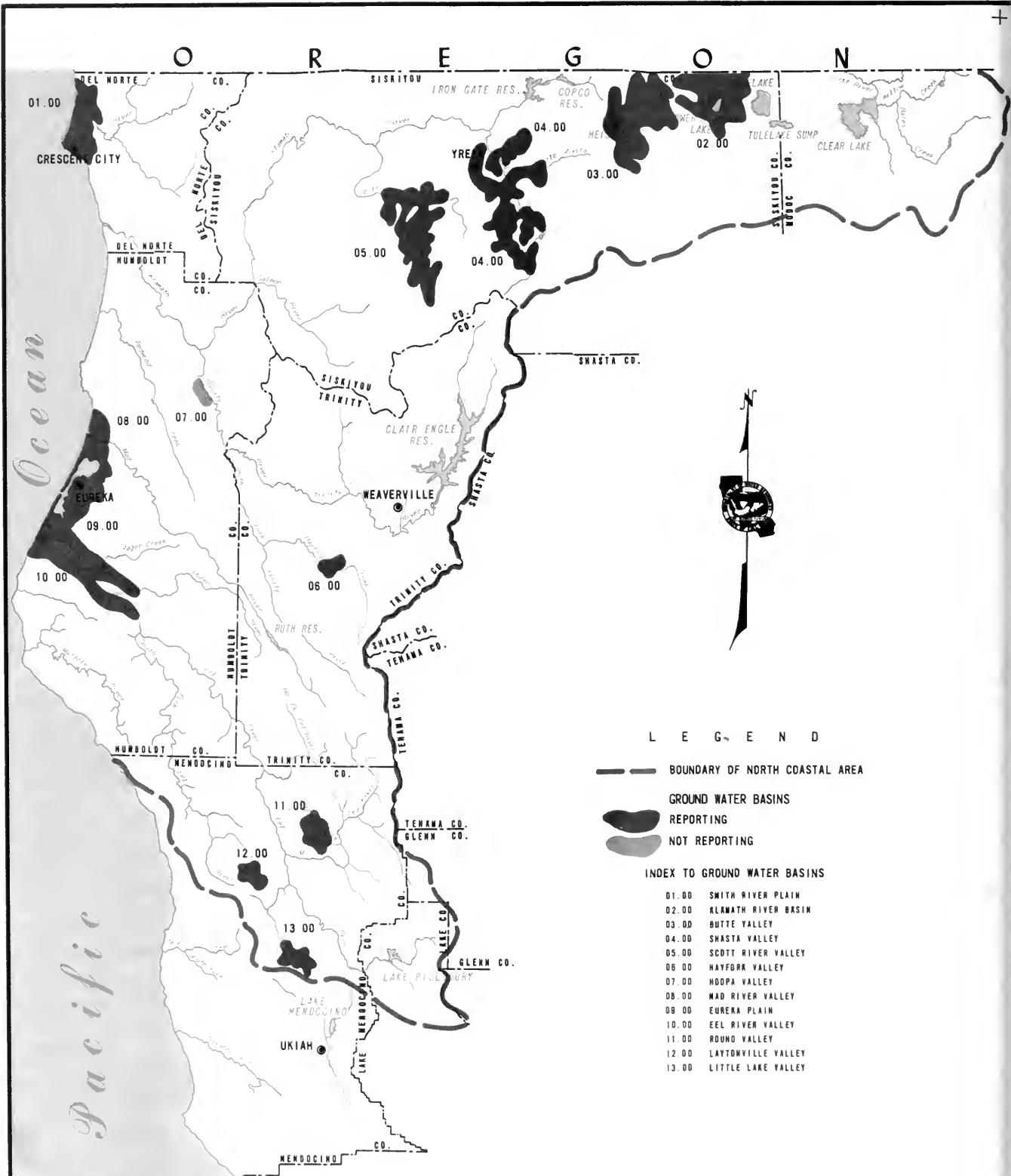
DATE TIME	SAMP LAB	G.M. O	TEMP TURB	FIELD CO <sub>2</sub> ALK.	FIELD PH	LABORATORY EC	LAH HC <sub>03</sub> CU <sub>3</sub>	NO <sub>2</sub> NH <sub>3</sub>	NUTRIENT CONSTITUENTS IN MILLIGRAMS PER LITER					
									NO <sub>3</sub> ORG N	DIS ORG N	NH <sub>3</sub> + ORG N	FIL, A.M.PO <sub>4</sub>	F PO <sub>4</sub> U PO <sub>4</sub>	F U TOT P
FA 1100.00														
10/20/70 1525	5050 5000	200	E	15.5C 2A	8.3 8.3	353	186 0							0.13
11/10/70 1630	5050 5000	6.02 18000		57 F 225A	7.8 7.7	180	75 0							2.3
12/08/70 1330	5050 5000	3.51 64600		53 F 30A	7.4 7.1	139	62 0							4.8
1/05/71 1400	5050 5000	5.0C 10900		53A	7.1 7.7	197	89 0							0.43
2/02/71 1515	5050 5000	3.22 6820		50 F 65A	7.6 7.8	190	93 0							0.58
3/02/71 1215	5050 5000	1.91 3600		48 F 20A	8.2 7.5	295	121							0.25
4/06/71 1315	5050 5000	12.8C 7300		20A	7.6 7.8	167	89							0.20
5/04/71 1745	5050 5000	12.8C 4370		5A	8.1 8.0	253	121							0.10
6/23/71 0815	5050 5000	0.03 766		19.0C 1A	7.9 7.3	234	130 0							0.05
7/20/71 1315	5050 5000	9.33 336		25.0C 1A	8.1 8.1	270	155 0							0.05
8/17/71 1305	5050 5000	8.96 187		24.0C 1A	8.1 8.2	296	165 0							0.10
9/14/71 1415	5050 5000	8.80 171		23.0C 1A	8.4 8.4	289	98 30							0.05
F6 1329.50														
EEL RIVER ABOVE OUTLET CREEK NEAR DOS RIOS														
10/21/70 1235	5050 5050	1.92 10		12.5C 10E	7.9 8.3	282	120 0							0.00
11/11/70 0900	5050 5050	2.76 205		55.0F 50E	7.5 7.9	181	82 0							0.03
12/09/70 0930	5050 5050	9.23 5720		46.0F 230E	7.3 7.6	108	56 0							0.03
1/06/71 1300	5050 5050	4.43 978		3.5C 40E	7.2 8.0	136	68 0							0.01
2/03/71 0910	5050 5050	4.55 990		42 F 70E	7.6 7.8	122	68 0							0.00
3/03/71 0900	5050 5050	2.69 136		46 F 5E	7.7 8.0	179	89 0							0.00
4/07/71 0955	5050 5050	3.71 349		52 F 15E	7.8 7.9	157	80 0							0.01
5/05/71 0825	5050 5050	3.42 260		57 F 10E	7.7 7.7	169	83 0							0.01
6/23/71 1205	5050 5050	2.65 30		25 C 2E	8.2 8.3	221	116							0.00
7/21/71 0645	5050 5050	2.56 13		24 C 1E	7.5 7.7	240	114 0							0.00
8/18/71 0815	5050 5050	2.46 10		21 C 1E	7.9 8.1	239	112 0							0.01
9/15/71 0750	5050 5050	2.43 8.4		20 C 2E	7.6 7.9	250	122 0							0.00
F6 3009.01														
EEL RIVER MIDDLE FORK AT DOS RIOS														
10/21/70 1320	5050 5050	8.29 33		13.5C 35E	8.0 8.0	400	112 0							0.00
11/11/70 1215	5050 5050	0.51 1310		55.0F 180E	7.5 7.7	181	75 0							0.02
12/09/70 1030	5050 5050	3.90 8040		45.0F 560E	7.8 7.7	126	66 0							0.71
1/06/71 1220	5050 5050	0.62 1520		3.0C 55E	7.5 7.9	140	68 0							0.00
2/03/71 1000	5050 5050	0.96 2340		43 F 180E	7.5 7.9	138	74 0							0.00
3/03/71 0945	5050 5050	9.71 792		43 F 30E	7.6 7.9	170	85 0							0.00
4/07/71 1000	5050 5050	1.31 2550		49 F 90E	7.6 7.8	146	73 0							0.01
5/05/71 0900	5050 5050	0.89 2030		52 F 70E	7.6 8.0	133	70 0							0.00
6/23/71 1300	5050 5050	8.95 245		22 C 2E	8.0 8.3	182	59 0							0.00
7/21/71 0750	5050 5050	8.39 64		23 C 2F	7.9 8.0	260	119 0							0.00
8/18/71 0910	5050 5050	8.10 22		22.0C 1E	8.0 8.3	306	123 0							0.01
9/15/71 0845	5050 5050	8.03 16		20 C 1F	8.0 8.0	318	106 0							0.00



**TABLE D-5 (Continued)**  
**NUTRIENT ANALYSIS OF SURFACE WATER**

**North Coastal Area**

DATE TIME	SAMP LAB	G.M. O	TEMP TURB	FIELD		FIELD		LAB CO <sub>2</sub> ALK. PH FC	N0 <sub>2</sub> NO <sub>3</sub> ORG N	NUTRIENT CONSTITUENTS IN MILLIGRAMS PER LITER						
				CO <sub>2</sub>	ALK.	LAB CO <sub>3</sub>	FC			D15 NH <sub>3</sub> + ORG N	FIL. NH <sub>3</sub> + ORG N	F PO <sub>4</sub>	F PO <sub>4</sub>	F TOT P	U PO <sub>4</sub>	U TOT P
				F6 3050.00						MILL CREEK NEAR COVELO						
11/11/70 1015	5050 5050	8.28 22	55.0F 15E	7.4		89				0.60						0.02
12/09/70 1245	5050 5050	5.66 350	47.0F 90E	7.3	7.5	208	0			0.18						0.02
1/06/71 1130	5050 5050	5.66 130	3.0C 3E	7.1	7.7	126	0			0.18						0.01
2/03/71 1045	5050 5050	8.61 94	43 F 5F	7.5	8.0	230	0			0.25						0.02
3/03/71 1030	5050 5050	8.24 45	47 F 3E	7.9	7.9	278	0			0.09						0.01
4/07/71 1030	5050 5050	8.84 120	52 F 5E	7.6	7.9	221	0			0.09						0.02
5/05/71 1000	5050 5050	8.39 44	58 F 4E	7.6	7.8	266	0			0.02						0.00
6/23/71 1325	5050 5050	7.74 2.1	27 C 1E	7.8	8.4	334	2			0.02						0.02
				F6 3200.00						BLACK BUTTE RIVER NEAR COVELO						
10/21/70 1455	5050 5050	4.90 17	13.5C 90E	7.9	8.0	393	0			0.00						0.00
11/11/70 1115	5050 5050	5.84 149	53.0F 110E	7.6	7.7	238	0			0.11						0.01
12/09/70 1145	5050 5050	6.53 500	48.0F 640E	7.6	7.8	127	0			0.02						0.65
1/06/71 1030	5050 5050	5.98 230	2.5C 40E	7.5	7.9	188	0			0.00						0.00
2/03/71 1125	5050 5050	5.76 630	39 F 180E	7.7	7.9	135	0			0.00						0.00
3/03/71 1115	5050 5050	4.50 190	42 F 25E	7.6	7.8	160	0			0.00						0.00
4/07/71 1140	5050 5050	5.56 530	49 F 70E	7.7	7.7	143	0			0.02						0.01
5/05/71 1045	5050 5050	4.89 300	51 F 20E	7.5	7.9	135	0			0.02						0.00
6/23/71 1420	5050 5050	3.82 60	23 C 2E	7.9	8.1	208	0			0.00						0.00
7/21/71 0905	5050 5050	3.49 21	23 C 1E	7.9	8.1	256	0			0.02						0.00
8/18/71 1000	5050 5050	3.26 7.5	23 C 1F	8.1	8.1	301	0			0.00						0.01
9/15/71 0950	5050 5050	3.19 6.0	21 C 1E	8.1	8.1	322	0			0.02						0.00
				F6 4100.00						EEL RIVER SOUTH FORK NEAR MIRANDA						
10/21/70 0945	5050 5050	3.64 81	13.0C RE	7.8	8.1	248	0			0.00						0.00
11/10/70 1445	5050 5050	7.11 2800	56.0F 230F	7.4	7.4	148	0			0.41						0.03
12/08/70 1500	5050 5050	2.39 15600	54.0F 400E	7.4	7.6	98	0			0.02						0.05
1/05/71 1530	5050 5050	7.13 2570	5.5C 45E	7.1	8.0	127	0			0.00						0.01
2/02/71 1630	5050 5050	6.04 1200	49 F 35E	7.3	7.9	144	0			0.02						0.02
3/02/71 1400	5050 5050	5.44 688	46 F 10E	7.7	7.9	175	0			0.02						0.02
4/06/71 1505	5050 5050	6.33 1500	55 F 20E	7.5	7.6	137	0			0.02						0.02
5/05/71 0610	5050 5050	5.56 772	57 F 4F	7.4	7.6	152	0			0.02						0.02
6/23/71 0930	5050 5050	4.59 176	20 C 2E	7.9	8.2	204	0			0.00						0.01
7/20/71 1445	5050 5050	4.39 93	27 C 2E	8.3	8.3	232	0			0.00						0.00
8/17/71 1430	5050 5050	4.29 62	24 C 1F	8.3	8.8	198	5			0.00						0.01
9/14/71 1515	5050 5050	2.4 C 140	24 C 2E	8.4	8.6	226	5			0.02						0.00



## GROUND WATER BASINS, WATER QUALITY SAMPLES

APPENDIX E  
GROUND WATER QUALITY

This appendix presents ground water quality data collected during the period from October 1, 1970, through September 30, 1971. The data were collected from a number of major ground water sources in the North Coastal area in cooperation with local agencies. During the 1971 water year, 109 wells were sampled in 12 ground water basins.

At the time of field sampling, pH, specific conductance, and temperature measurements are made. The results are compared with measurements made in previous years. If a substantial change is noted, the samples are submitted to the laboratory for further analyses.

Laboratory analyses of ground waters were performed in accordance with "Standard Methods for the Examination of Water and Waste Water", 13th Edition, 1971.

The Region and Basin and State Well Numbering Systems are described in Appendix C, "Ground Water Measurements".

TABLE E-1 MINERAL ANALYSIS OF GROUND WATER

An explanation of column headings follows:

The LAB and SAMPLER agency code is as follows:

5050 - California Department of Water Resources

TIME

- Pacific Standard Time on a 24-hour clock.

TEMP

- Water temperature in degrees Fahrenheit or degrees Celsius. The computer prints out both.

PH LAB & FIELD

- Measure of acidity or alkalinity of water.

EC LAB

- The electrical conductance in micromhos at 25° Celsius.

EC FIELD

- The electrical conductance in micromhos at time of field sampling.

TDS

- Gravimetric determination of total dissolved solids at 180° Celsius.

SUM

- Total dissolved solids determined by addition of analyzed constituents.

TH

- Total hardness.

NCH

- Noncarbonate hardness.

SAR

- Sodium adsorption ratio.

PERCENT REACTANCE

VALUE

- Determined by dividing the sum of the cations or anions in milliequivalents per liter into each constituent in milliequivalents per liter arriving at a percentage. For a partial analysis, an approximate value is determined by multiplying the electrical conductance by 0.01 and using that as the cation or anion sum.

The MINERAL CONSTITUENTS are as follows:

B	- Boron	K	- Potassium
CA	- Calcium	MG	- Magnesium
CL	- Chloride	NA	- Sodium
CO <sub>3</sub>	- Carbonate	NO <sub>3</sub>	- Nitrate
F	- Fluoride	SiO <sub>2</sub>	- Silica
HC <sub>03</sub>	- Bicarbonate	SO <sub>4</sub>	- Sulfate

**TABLE E-1**  
**MINERAL ANALYSIS OF GROUND WATER**  
**North Coastal Area**

TE MF	SAMPLER LAB	TEMP FIELD PH EC	LABORATORY PH EC	MINERAL CONSTITUENTS IN					MILLIGRAMS PER LITER			MILLIGRAMS PER LITER						
									MILLIEQUIVALENTS PER LITER			PERCENT REACTANCE VALUE						
				CA	MG	NA	K	CO <sub>3</sub>	HCO <sub>3</sub>	SO <sub>4</sub>	CL	NO <sub>3</sub>	8	F	TDS SUM	TH NCH	SAR	
1 1-01																		
NORTH COASTAL REGION SMITH RIVER PLAIN																		
2/71 30	5050	16N/01W-02001	H	59	F	6.5	185	--	--	--	.0	73	--	8.3	--	--	63	
				15	C	7.1	169	--	--	--	.00	1.20	71	.23	.23	14		
3/71 10	5050	16N/01W-20H01	H	66	F	5.9	150	--	--	--	--	--	--	--	--	--		
				19	C			--	--	--	--	--	--	--	--	--		
4/71 30	5050	16N/02W-13E01	H	61	F	6.1	325	--	--	--	--	--	--	--	--	--		
				16	C			--	--	--	--	--	--	--	--	--		
5/71 50	5050	17N/01W-03E01	H	66	F	7.1	315	--	--	--	.0	189	--	7.2	--	--	166	
				19	C	8.1	335	--	--	--	.00	3.10	93	.20	.20	6		
6/71 15	5050	17N/01W-14C02	H	59	F	6.3	170	--	--	--	.0	91	--	7.9	--	--	84	
				15	C	7.3	172	--	--	--	.00	1.49	87	.22	.22	13		
7/71 25	5050	18N/01W-05K01	H	63	F	5.9	165	--	--	--	.0	36	--	23	14.0	--	47	
				17	C	7.2	168	--	--	--	.00	.59	35	.65	.23	39		
8/71 10	5050	18N/01W-17K04	H	64	F	7.1	278	--	--	--	.0	36	--	23	14.0	--	47	
				18	C			--	--	--	--	--	--	--	--	--		
9/71 10	5050	18N/01W-26H01	H	64	F	6.5	80	--	--	--	.0	36	--	23	14.0	--	47	
				18	C			--	--	--	--	--	--	--	--	--		
10/71 10	5050	18N/01W-34M02	H	58	F	6.8	325	--	--	--	--	--	--	--	--	--		
				14	C			--	--	--	--	--	--	--	--	--		
1-02																		
KLAMATH RIVER BASIN																		
11/71 15	5050	46N/02E-15F01	M	59	F	7.1	162	--	--	--	--	--	--	--	--	--		
				15	C			--	--	--	--	--	--	--	--	--		
12/71 10	5050	47N/02E-20C01	M	63	F	6.9	1950	154	71	132	4.4	.0	118	332	314	116	1140	
				17	C	7.2	1900	7.68	5.84	5.74	.11	.00	1.93	6.91	8.85	1.87	1182	
1-03																		
BUTTE VALLEY																		
13/71 10	5050	45N/01E-04C02	M	57	F	7.5	185	--	--	--	--	--	--	--	--	--		
				14	C			--	--	--	--	--	--	--	--	--		
14/71 10	5050	47N/01E-06A02	M	56	F	7.6	1020	--	--	170	--	36	516	--	28	--	--	168
				13	C	8.9	988	--	7.40	9.87	.56	.00	10.77	8.46	.79	.8		
15/71 10	5050	47N/01E-06J01	M	58	F	7.6	1240	27	24	227	22	.0	657	72	51	4.1	1.20	--
				14	C	8.2	1240	1.35	1.97	9.87	4	.00	7.8	1.50	1.44	.07	1	804
16/71 10	5050	47N/01E-07C02	M	66	F	7.7	620	--	--	88	--	.0	278	--	36	--	--	111
				19	C	8.1	615	--	--	3.83	--	.00	4.56	74	1.02	1.17	17	
17/71 10	5050	47N/01E-07C03	M	76	F	8.0	442	--	--	--	.0	211	--	27	--	--	42	
				24	C	8.4	453	--	--	--	.00	3.46	76	.76	.76	17		
18/71 10	5050	47N/01E-08001	M	62	F	8.1	650	--	--	--	.0	405	--	6.2	--	--	102	
				17	C			--	--	--	.00	6.64	99	.17	.17	3		

**TABLE E-1 (Continued)**  
**MINERAL ANALYSIS OF GROUND WATER**  
 North Coastal Area

DATE TIME	SAMPLE LAB	TEMP PH	FIELD LABORATORY EC	MINERAL CONSTITUENTS IN								MILLIGRAMS PER LITER				MILLIGRAMS PER LITER			
				CA	MG	NA	K	CO3	HCO3	SO4	CL	NO3	B	F	TDS SUM	TM NCH	SAF		
1	1-03	NORTH COASTAL REGION BUTTE VALLEY												CONTINUED					
08/26/71 0730	5050 5050	47N/01E-20D01	M 56 13	F C 8.1	7.7	528 521 1.70 30	34 17 1.40 25	54 2.35 42	7.8 .20 4	.0 .00 323 5.29 91	3.8 .08 1	14 .39 7	1.7 .03 1	.10 --	337 291	154 110	1.9		
08/26/71 0800	5050 5050	47N/01E-31A01	M 65 18	F C 7.6 7.9	215 221	-- -- 1.31 59	-- -- 30 59	-- -- --	.0 .00 119 1.95 88	-- -- 2.0 .06 3	-- -- --	-- -- --	-- -- --	-- -- --	52				
08/25/71 1220	5050	47N/01E-32A01	M 69 21	F C 7.8	222	-- -- --	-- -- --	-- -- --	-- -- --	-- -- --	-- -- --	-- -- --	-- -- --	-- -- --	-- -- --				
08/24/71 1245	5050 5050	48N/01E-30F01	M 55 13	F C 7.8	305 294	26 1.30 41	14 1.15 36	14 .61 19	4.9 .13 4	.0 .00 169 2.77 91	10 .21 7	2.0 .06 2	.2 0.00 0	.10 --	207 154	122 116	0.6		
08/26/71 1500	5050 5050	45N/01W-33D01	M 61 16	F C 7.1 7.4	115 110	-- -- --	-- -- --	-- -- --	.0 .00 65 1.07 97	-- -- --	.0 .00 --	-- -- --	-- -- --	-- -- --	48				
08/27/71 0925	5050	45N/02W-01P01	M 51 11	F C 6.5	200	-- -- --	-- -- --	-- -- --	-- -- --	-- -- --	-- -- --	-- -- --	-- -- --	-- -- --	-- -- --				
08/27/71 1100	5050 5050	45N/02W-01Q02	M 48 9	F C 6.3 7.8	105 101	8.5 .42 41	4.6 .38 37	4.3 .19 18	1.6 .04 4	.0 .00 53 .87 94	.7 .01 1	.0 .00 2.8 .05 5	.00 --	-- --	55 49	40 4	0.3		
08/26/71 0900	5050 5050	46N/01W-02F01	M 56 13	F C 8.0 8.0	390 382	-- -- --	-- -- --	-- -- --	.0 .00 224 3.67 96	-- -- --	4.3 .12 3	-- -- --	-- -- --	-- -- --	111				
08/26/71 1630	5050 5050	46N/01W-06P01	M 53 12	F C 7.2 7.8	655 632	-- -- --	-- -- --	-- -- --	.0 .00 370 6.06 96	-- -- --	9.1 .26 4	-- -- --	-- -- --	-- -- --	256				
08/15/71 1430	5050 5050	46N/01W-09R01	M 57 14	F C 8.2 8.5	425 398	-- -- --	-- 3.26 82	75 3.0 10	248 4.06 102	-- -- --	2.8 .08 2	-- -- --	-- -- --	-- -- --	58				
08/25/71 1315	5050	46N/01W-17801	M 55 13	F C 8.0	370	-- -- --	-- -- --	-- -- --	-- -- --	-- -- --	-- -- --	-- -- --	-- -- --	-- -- --	-- -- --				
08/25/71 1400	5050 5050	46N/01W-17G02	M 59 15	F C 8.0 8.1	390 391	-- -- --	-- 15 .65 17	-- -- --	215 3.52 90	-- -- --	7.3 .21 5	-- -- --	-- -- --	-- -- --	172				
08/25/71 1300	5050	46N/01W-17L01	M 55 13	F C 7.3	465	-- -- --	-- -- --	-- -- --	-- -- --	-- -- --	-- -- --	-- -- --	-- -- --	-- -- --	-- -- --				
08/26/71 1400	5050 5050	46N/01W-18002	M 52 11	F C 7.3 8.0	600 576	-- -- --	-- 28 1.22 21	-- -- --	.0 .00 381 6.24 108	-- -- --	4.8 .14 2	-- -- --	-- -- --	-- -- --	259				
08/27/71 0830	5050 5050	46N/01W-19J04	M 51 11	F C 7.1 8.0	320 320	-- -- --	-- -- --	-- -- --	.0 .00 151 2.47 77	-- -- --	2.8 .08 3	-- -- --	-- -- --	-- -- --	138				
08/27/71 0900	5050 5050	46N/01W-31B02	M 53 12	F C 7.0 8.0	338 339	-- -- --	-- -- --	-- -- --	.0 .00 149 2.44 72	-- -- --	1.4 .04 1	-- -- --	-- -- --	-- -- --	148				
08/27/71 0910	5050 5050	46N/01W-31R01	M 52 11	F C 6.8 7.8	200 200	-- -- --	-- -- --	-- -- --	.0 .00 94 1.54 73	-- -- --	1.0 .03 2	-- -- --	-- -- --	-- -- --	88				

TABLE E-1 (Continued)  
MINERAL ANALYSIS OF GROUND WATER  
North Coastal Area

TE ME 1	SAMPLER LAB	TEMP FIELD LABORATORY	MINERAL CONSTITUENTS IN PERCENT REFRACTANCE VALUE												MILLIGRAMS PER LITER				MILLIGRAMS PER LITER																							
			PH	EC	MILLIEQUIVALENTS PER LITER				CO <sub>3</sub>	HCO <sub>3</sub>	SO <sub>4</sub>	CL	NO <sub>3</sub>	8 5102				TDS SUM				TH NCH		SAR																		
					CA	MG	NA	K						PERCENT REFRACTANCE VALUE				8 5102				TH NCH		SAR																		
1 1-03																																										
NORTH COASTAL REGION BUTTE VALLEY																																										
CONTINUED																																										
46N/02W-13P01	5050	M	52	F	7.1	455	20	20	36	6.0	.0	243	1.2	9.0	12.0	.00	--	276	134	224	67	1.4																				
	5050		11	C	8.3	411	1.00	1.64	1.57	.15	.00	3.98	.02	.25	.19		--																									
						23		38	36	3		90		6	4																											
46N/02W-13001	5050	M	53	F	7.3	660	41	39	33	8.8	.0	3870	21	5.8	10.0	.00	--	387	264	2061	2911	0.9																				
	5050		12	C	7.8	619	2.05	3.21	1.44	.23	.00	63.43	.44	.16	.16		--																									
						30		46	21	3		99	1																													
46N/02W-16A02	5050	M	51	F	7.8	180	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--																			
	5050		11	C																																						
46N/02W-25R01	5050	M	54	F	7.1	370	--	--	14	--	.0	173	--	2.4	--	--	--	--	--	--	--	--	156																			
	5050		12	C	7.8	354			.61		.00	2.84		.07																												
									17			80		2																												
46N/02W-26P01	5050	M	54	F	7.7	192	--	--	--	--	.0	112	--	.0	--	--	--	--	--	--	--	--	76																			
	5050		12	C	8.1	187					.00	1.84		.00																												
46N/02W-26002	5050	M	60	F	7.1	268	--	--	--	--	.0	141	--	3.5	4.1	--	--	--	--	--	--	--	105																			
	5050		16	C	7.6	253					.00	2.31		.10	.07																											
												91		4	3																											
46N/02W-34B01	5050	M	56	F	7.3	150	--	--	--	--	.0	90	--	1.0	--	--	--	--	--	--	--	--	64																			
	5050		13	C	7.9	152					.00	1.48		.03																												
												97		2																												
46N/02W-36K01	5050	M	54	F	7.7	320	--	--	9.2	--	.0	128	--	3.0	--	--	--	--	--	--	--	--	142																			
	5050		12	C	7.7	320			.40		.00	2.10		.08																												
									13			66		3																												
47N/01W-23H02	5050	M	64	F	7.4	285	7.7	9.2	37	7.0	.0	139	.0	13	10.0	.20	--	193	57	152	57	2.1																				
	5050		18	C	7.6	286	.38	.76	1.61	.18	.00	2.28	.00	.37	.16		--																									
						13		26	55	6		81		13	6																											
47N/02W-21H03	5050	M	64	F	7.3	112	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--																				
	5050		18	C																																						
48N/01W-28F01	5050	M	82	F	9.1	200	--	--	--	--	1.0	103	--	7.5	--	--	--	--	--	--	--	--	11																			
	5050		28	C	8.5	195					.03	1.69		.21																												
												87		11																												
48N/01W-28J03	5050	M	57	F	7.4	520	41	23	34	7.2	.0	287	25	6.0	9.7	.10	--	336	198	287	38	1.1																				
	5050		14	C	8.3	493	2.05	1.89	1.48	.18	.00	4.70	.52	.17	.16		--																									
						37		34	26	3		85	9	3	3																											
48N/01W-31M01	5050	M	62	F	7.3	485	--	--	13	--	.0	101	--	32	--	--	--	--	--	--	--	--	190																			
	5050		17	C	7.9	465			.57		.00	1.66		.90																												
									12			36		19																												
48N/01W-34B01	5050	M	56	F	7.6	560	27	39	14	5.6	.0	288	19	7.4	6.1	.10	--	284	229	260	8	0.4																				
	5050		13	C	8.3	468	1.35	3.21	.61	.14	.00	4.72	.40	.21	.10		--																									
						25		60	11	3		87	7	4	2																											
48N/01W-34G01	5050	M	71	F	7.9	510	24	21	52	12	.0	313	3.0	12	3.5	.20	--	306	146	282	110	1.9																				
	5050		22	C	8.1	503	1.20	1.73	2.26	.31	.00	5.13	.06	.34	.06		--																									
						22		31	41	6		92	1	6	1																											
48N/01W-36J01	5050	M	57	F	7.3	1350	--	--	--	--	.0	769	--	33	--	--	--	--	--	--	--	--	365																			
	5050		14	C	8.2	1310					.00	12.60		.93																												
												96		7																												
1-04	SHASTA VALLEY																																									
42N/05W-20J01	5050	M	60	F	6.8	410	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--																				
	5050		16	C																																						

TABLE E-1 (Continued)  
MINERAL ANALYSIS OF GROUND WATER  
North Coastal Area

DATE TIME	SAMPLER LAB	TEMP FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN CA MG NA K CO <sub>3</sub> HC <sub>03</sub> SO <sub>4</sub> CL NO <sub>3</sub>	MILLIGRAMS PER LITER		MILLIEQUIVALENTS PER LITER		PERCENT REACTANCE VALUE		MILLIGRAMS PER LITER									
				B	F	SI <sub>02</sub>	TDS SUM	TH NCH	SAR										
1-04			NORTH COASTAL REGION SHASTA VALLEY									CONTINUED							
08/03/71 0930	5050	42N/06W-10J01	M 67 19 F C	7.3	540	--	--	--	--	--	--	--	--						
08/03/71 1200	5050	43N/05W-02C01	M 53 12 F C	6.5	250	--	--	--	--	--	--	--	--						
08/03/71 1000	5050	43N/06W-21R01	M 62 17 F C	7.4	495	62	23	7.9	1.2	.0	308	6.4	1.2	5.4	.00	--	261	248	0.2
08/03/71 1100	5050 5050	44N/05W-32C02	M 63 17 F C	7.3	1430	49	79	134	4.6	.0	583	13	177	3.2	2.00	--	814	448	2.8
08/03/71 1105	5050 5050	44N/05W-32C03	M 63 17 F C	7.2	1150	1160	--	--	--	.0	587	--	104	--	--	--	--	446	
08/03/71 1145	5050	44N/05W-34H01	M 58 14 F C	7.1	760	--	--	--	--	--	--	--	--	--	--	--	--		
08/03/71 1045	5050 5050	44N/05W-22K01	M 66 19 F C	7.1	470	46	19	22	2.7	.0	233	8.1	13	30.0	.20	--	280	194	0.7
08/04/71 0900	5050	45N/05W-06E01	M 68 20 F C	8.1	960	--	--	--	--	--	--	--	--	--	--	--	--		
08/04/71 0810	5050	45N/06W-19E01	M 64 13 F C	7.5	340	--	--	--	--	--	--	--	--	--	--	--	--		
1-05			SCOTT RIVER VALLEY																
08/03/71 1440	5050	42N/09W-27K01	M 57 14 F C	6.0	63	--	--	--	--	--	--	--	--	--	--	--	--		
08/03/71 1340	5050 5050	43N/09W-02G01	M 60 16 F C	7.2	445	--	--	--	--	--	--	--	--	--	--	--	--		
08/03/71 1600	5050	43N/09W-08F01	M 67 19 F C	6.3	98	--	--	--	--	--	--	--	--	--	--	--	--		
08/03/71 1410	5050	43N/09W-24F02	M 57 14 F C	7.1	428	--	--	--	--	--	--	--	--	--	--	--	--		
08/03/71 1505	5050 5050	43N/09W-29G02	M 63 17 F C	6.1	58	--	--	--	--	--	--	--	--	--	--	--	--		
08/03/71 1535	5050	43N/10W-11E01	M 56 13 F C	6.3	85	--	--	--	--	--	--	--	--	--	--	--	--		
08/03/71 1400	5050	44N/09W-34R01	M 63 17 F C	6.8	330	--	--	--	--	--	--	--	--	--	--	--	--		
1-06			HAYFORK VALLEY																
08/16/71 1030	5050	31N/12W-12L01	M 60 16 F C	6.1	180	--	--	--	--	--	--	--	--	--	--	--	--		

TABLE E-1 (Continued)  
 MINERAL ANALYSIS OF GROUND WATER  
 North Coastal Area

DATE TIME SAR	SAMPLER LAB	TEMP FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN CA MG NA K CO <sub>3</sub> HCO <sub>3</sub> SO <sub>4</sub> CL NO <sub>3</sub>	MILLIGRAMS PER LITER				MILLIGRAMS PER LITER							
				MILLIEQUIVALENTS PER LITER				PERCENT PRACTICE VALUE							
				B	F	TDS SUM	TH NCH	SIO <sub>2</sub>	SI02	SAR					
1 1-06															
NORTH COASTAL REGION HAYFORK VALLEY															
CONTINUED															
8/1/71 10	5050	31N/12W-15K01	M 66 19 C	6.5 268	--	--	--	--	--	--	--	--			
8/1/71 00	5050	05N/01E-04H04	H 60 16 C	7.7 445	--	--	--	--	--	--	--	--			
8/1/71 10	5050	06N/01E-07M01	H 62 17 C	6.3 520	--	--	--	--	--	--	--	--			
8/1/71 10	5050	06N/01E-08H01	H 60 16 C	5.9 182	--	--	--	--	--	--	--	--			
8/1/71 15	5050	06N/01E-19Q01	H 60 16 C	6.5 365	--	--	--	--	--	--	--	--			
8/1/71 05	5050	06N/01E-30N01	H 65 18 C	7.2 380	--	--	--	--	--	--	--	--			
8/1/71 05	5050	06N/01E-32F01	H 66 19 C	7.3 680	--	--	--	--	--	--	--	--			
8/1/71 10	5050	06N/01W-01H01	H 64 19 C	6.3 158	--	--	--	--	--	--	--	--			
1-09															
EUREKA PLAIN															
8/1/71 05	5050	05N/01E-18Q01	H 63 17 C	7.6 775	--	--	--	--	--	--	--	--			
8/1/71 05	5050	05N/01E-20Q01	H 57 14 C	6.3 275	--	--	--	--	--	--	--	--			
8/1/71 05	5050	04N/01W-08P01	H 57 14 C	7.7 155	--	--	--	.0 .00	66 1.08	--	--	--			
8/1/71 15	5050	04N/01W-08P01	H 57 14 C	8.0 157	--	--	--	.00 69	14 25	--	--	54			
8/1/71 15	5050	04N/01W-16H01	H 58 14 C	7.4 485	--	--	--	.0 .00	250 4.10	--	30 .85	7.2 .12			
8/1/71 08	5050	04N/01W-17H01	H 55 13 C	7.1 487	--	--	--	.0 84	250 84	--	17	2			
8/1/71 08	5050	05N/01W-29Q01	H 60 15 C	6.5 275	--	--	--	--	--	--	--	--			
1-10															
EEL RIVER VALLEY															
8/1/71 12	5050	02N/01W-04Q01	H 59 15 C	7.0 540	--	--	--	--	--	--	--	--			
8/1/71 12	5050	02N/01W-07F01	H 56 13 C	7.1 460	--	--	--	--	--	--	--	--			
8/1/71 09	5050	03N/01W-05K01	H 61 16 C	6.3 150	--	--	--	--	--	--	--	--			

TABLE E-1 (Continued)  
MINERAL ANALYSIS OF GROUND WATER  
North Coastal Area

DATE TIME	SAMPLER LAB	TEMP FIELD PH EC	MINERAL CONSTITUENTS IN						MILLIGRAMS PER LITER				MILLIGRAMS PER LITER							
			CA	MG	NA	K	CO <sub>3</sub>	HC <sub>03</sub>	SO <sub>4</sub>	CL	NO <sub>3</sub>	B	F	TDS	TH	SiO <sub>2</sub>	SUM	NCH	SAR	
1-10																				
NORTH COASTAL REGION EEL RIVER VALLEY																				
CONTINUED																				
08/10/71 0930	5050	03N/01w-18A01	H 59 15	F C	7.1	438	--	--	--	--	--	--	--	--	--	--	--	--		
08/10/71 1445	5050	03N/01w-30N01	H 56 13	F C	6.5	570	--	--	--	--	--	--	--	--	--	--	--	--		
08/10/71 1015	5050 5050	03N/02w-13J01	H 57 14	F C	6.8	3500	--	--	--	.0 .00	239 3.92	--	1090 30.74	--	--	--	--	1230		
08/10/71 1315	5050	03N/02w-32001	H 57 14	F C	8.3	910	--	--	--	--	--	--	--	--	--	--	--	--		
08/10/71 1420	5050	03N/02w-35M01	H 56 13	F C	7.0	760	--	--	--	--	--	--	--	--	--	--	--	--		
1-11																				
ROUND VALLEY																				
05/12/71 0900	5050	22N/12w-06L02	H 59 15	F C	7.1	430	--	--	--	--	--	--	--	--	--	--	--	--		
05/12/71 0820	5050	22N/13w-01J03	H 58 14	F C	7.1	220	--	--	--	--	--	--	--	--	--	--	--	--		
05/12/71 1100	5050	22N/13w-13A01	H 63 17	F C	7.0	245	--	--	--	--	--	--	--	--	--	--	--	--		
05/12/71 0950	5050	23N/12w-33L03	H 59 15	F C	7.1	620	--	--	--	--	--	--	--	--	--	--	--	--		
05/12/71 1035	5050	23N/13w-36P03	H 66 13	F C	6.8	250	--	--	--	--	--	--	--	--	--	--	--	--		
1-12																				
LAYTONVILLE VALLEY																				
05/11/71 1330	5050	21N/15w-01L02	H 56 13	F C	7.1	440	--	--	--	--	--	--	--	--	--	--	--	--		
05/11/71 1320	5050	21N/15w-12M02	H 59 15	F C	5.7	65	--	--	--	--	--	--	--	--	--	--	--	--		
1-13																				
LITTLE LAKE VALLEY																				
05/11/71 1500	5050 5050	18N/13w-08L01	H 57 14	F C	6.1 8.2	320 298	--	--	--	.0 .00	160 2.62	--	4.0 .23	--	--	--	--	112		
05/11/71 1530	5050 5050	18N/13w-20H03	H 56 13	F C	6.1 7.9	150 138	13 .65 .65 44	8.4 .69 .69 47	2.8 .12 .02 8	.8 0.0 1 1	.0 1.29 0.05 92	79 2.3 .05 4	2.2 .06 .00 4	.2 1.0 .00 4	.10 --	82 69	67 3	0.1		

TABLE E-2  
TRACE ELEMENT ANALYSES OF GROUND WATER  
NORTH COASTAL AREA

State Well Number	Date	Constituents in parts per million							
		As	Cd	Cu	Fe (Total)	Pb	Mn	Se	Zn

BUTTE VALLEY (1-3.00)

47N-1E-6J1 8-25-71 0.00  
48N-1E-31D3 8-24-71 0.00

SHASTA VALLEY (1-4.00)

44N-5W-32C2 8- 3-71 0.00 0.00 0.00 0.01 0.01 0.08 0.00 0.01

SCOTT RIVER VALLEY (1-5.00)

43N-9W- 2G1	8- 3-71	0.00
43N-9W-29G2	8- 3-71	0.01

MAD RIVER VALLEY (1-8.00)

6N-1E-19Q1 8- 9-71 0.00 0.00 0.01 0.22 0.02 0.40 0.00 0.01

EUREKA PLAIN (1-9.00)

4N-1W-17B1 8-10-71 0.00 0.00 0.00 0.03 0.00 0.00 0.00 0.00 0.01

## CONSTITUENTS

As	Arsenic
Cd	Cadmium
Cu	Copper

Fe	Iron
Pb	Lead
Mn	Manganese

Se      Selenium  
Zn      Zinc

